SAKKITITAUKKOGAJATTUT PINIANNET PILUATTOMIK UTSOALUUNIK ATJATUTTUSANNIK PUJULINIK LABRADORIP STRAIT OF BELLE ISLE-LIOLLO IMAPPINGITIGUT

POTENTIAL ISSUES ASSOCIATED WITH SHIPPING OIL AND GAS THROUGH THE LABRADOR SEA AND STRAIT OF BELLE ISLE

Environment Canada

Fisheries & Oceans

Indian Affairs and Northern Development

Government of Newfoundland & Labrador

Labrador Inuit Association

Canadian Petroleum Association

ENVIRONMENTAL ADVISORY COMMITTEE ON NEWFOUNDLAND AND LABRADOR MARINE TRANSPORTATION (EACNLMT)

AVATALIGIJET KIMIGOTINGITA KATIMAJINGINNIK NEOFALAME LABRADORIOLLO INGEGAUTULIGJINGINNIK

SAKKITITAUKKOGAJATTUT PINIANNET PILUATTOMIK UTSOALUUNIK ATJATUTTUSANNIK PUJULINIK LABRADORIP STRAIT OF BELLE ISLE-LIOLLO IMAPPINGITIGUT

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September, 1989

OKausigijaujut issomagijaujullo omane titigattausimajome oKausiojut Avataligijet Kaujisattingeta Katimajinginnut, Neofunlame Labradorimillo Imappikut Ingegautuligijinginne, oKausigijaujullo pasidlilungetut oKausinginnek mallegatsagijanginnillo ikajujuit katitjuKatigenniojuit. Taisinnivut katitjuKatigennik ubvalo taisinnivut niovivigalait atittagisimajanginsimajanginnek peKotigalannek atuttauKojinginginnek aullaigatsauKojinginginnilo peKKotinginnek oKalungelagut.

PREFACE

Statements and views presented in this report are those of the Environmental Advisory Committee on Newfoundland and Labrador Marine Transportation and do not necessarily reflect the views and policies of the sponsoring agencies. Mention of trade names or commercial products does not constitute endorsement or recommendation of use.

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1980-ME INULIGIJET TAGGANIMIONIK KAMAJIOJUT kamaliaKilauttut kamagijaudlutik Kanadaup Avataligijet Kimigotigijanginnut, inunnik katimatitsiliaKilauttut Kaujitigasuamut Kinugautaujumik utsoalunnik sanagasuamut Beaufortiop Imappisuanganne Kanadaullo Arctikkingane (avanialuk), taipkoa utsoaluit seKinittinut atjatuttauKattatillugit kffikut sekusiotikkulonet pujulikkut ubvalolonet tamattigut utsoalunnialutik. Tamanna sulliagijauKatillugo, 1981-nime Kanadaup Avataligijiop AngajoKasuanga tilitlilauttok Beaufortiop Imappiligijingata Avataligijingitalo Kimigotingita Katimattinginnik. KaujisaKojaudlutik Kanok pijoKagajammangat asiKKitogajappat Kanorlo annesittailiKogajammangat Kanok peKKojaujoKappat pigiasijaullagigajappat. Kimigoniosimajok kamaloattovinek nunaliojonek tagganetonek 60 degrees latitudetime.

Tilitjiniagamek avatannek kamaKojidlotik katimajinginnut, Neofalap Labradoriollo

Kavamanga, Labrador Inuit KatitjuKatigenget, Kinogasimavut KaujisattoKagiaKaninganek Kanok usiKattajut pujulet ingeganinginne attuigajakkomangamik kitanimiot imappinginne (seKinganit 60 degreesinik nunalimmionik taggamiongujut killianejunik). Katimajiojut kiolaukKulle imak Kinoagijaujuk Kimigotausimajuk mallegatsanginnelungininganik

kamagigiangit, titigatsimajaminillo allasimalauttut, pekKojidlutik Kanadaup AngajoKasuanganik Avataligijiop imak:

(a) tilitlilutik, ilaKallutik Neofalap Labradoriollo Kavamanganik, imminik kamagonatomik katitsiKatigenniojomik katimatitsigiamik inunnik Kaujisagasuamut avataujut, inuillo inosigijanginnik nunanimmine Kaujisautigillugit atjatuttiojut pujulet issomagillugit Labradorip Imappingitiguligunik; ubvalo

(b) Kimigotitsilutik tamatsoma mitsanut katimatsoatitsilutik Neofalame. PekKojalialiottaujut tapsomane katimatsoannime nenittaugialet, okoallo Kanadame Avataligijingit sakKititsigasoajutsaujut sulliatsagijaminik sunanik kamagigiaKagajaminik. Tapkoa katimajiojuit peKKojiningitigut, Kanadaup Avataligijingit, Ogganiatuligijet Imappiligijello, Inuligijet Taggamionillo kamajet, Ingegautuligijingillo (taijaujut Kanadame Coast Guardingit) pigiasititsilauttut Avataligijet Kimigotingita Katimajinginnik Neofalame Labradoriollo Ingegautuligjinginnik (EACNLMT) Octobarautillo 1984-rame. Kivgatutet Neofalap Labradoriollo Kavamamionginnik, Kanadame Utsoalunniatingita KatutjiKatigenget, Labradorip Inuit KatitjuKatigenginnik, Naskaupi-Montagnaiset (Allait) itsivaKojaulauttut katimajioKataugiamut.

IN 1980, THE DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN Development initiated a formal public review of a proposed oil development project in Canada's Arctic under the federal Environmental Assessment and Review Process. The project included production of oil from the Beaufort Sea and transport of the oil to southern markets by pipeline, tanker or both. The federal Minister of the Environment appointed the Beaufort Sea Environmental Assessment Panel in 1981 to review the activities involved, to identify potential impacts of the project and to recommend mitigative measures. The review included only activities north of 60 degrees N latitude.

In a submission to the Assessment Panel, the Government of Newfoundland and Labrador and the Labrador Inuit Association proposed a public review of the effects of potential tanker traffic in east coast waters south of 60 degrees N. The Assessment Panel responded that such a review was not within its mandate and recommended in its report that the federal Minister of the Environment either:

(a) appoint, with the Government of Newfoundland and Labrador, an independent review body to conduct a public review on the environmental and socio-economic effects of tanker traffic in the Labrador Sea; or

(b) sponsor a review of this issue at a conference called for that purpose to be held in Newfoundland. Recommendations made at the conference should be published, and the federal Department of Environment should attempt follow-up action where appropriate.

AS A RESULT OF THE PANEL'S RECOMMENDATION, THE FEDERAL Departments of the Environment, Fisheries and Oceans, Indian Affairs and Northern Development, and Transport established the Environmental Advisory Committee on Newfoundland and Labrador Marine Transportation (EACNLMT) in October 1984. Representatives from the Government of Newfoundland and Labrador, the Canadian Petroleum Association, the Labrador Inuit Association and the Naskaupi-Montagnais Innu Association were invited to sit on the Committee. The Committee reported to the Director General, Canadian Coast Guard-Newfoundland Region and was charged with responsibilities:

- To provide a forum for consultation among government, native groups, industry and others on environmental and resource use activities relating to the management of shipping routes and ship movements within the waters surrounding Newfoundland and Labrador.

TAPKOA KATIMAJIOJUT OKALAUTTUTT KAUJIGATSANIK AngajoKasuangujumut, Kanadaup Coast Gardinginnut Neofalame, ukuningalo tunitjiviolauKut kamagigialiminek:

- Katimajiktalutik oKalaKatauKatajutsanek kavamamionut, nunalitoKaujuit katitsiKatigenginnut, suliaKaviojunut sorlo nioviviojunut, ilanginnullo atoKattaKotunik avataujunik piviannaujunillo aulatsiKataugonatunullo pujuliojut ingegavigiKattajanginne aulanninginillo imappigijanginne Neofalap Labradoriollo.
- PekKojippata Kanadame Coast Gardingit, Kimigotaullutik omajuit piviannaujullo imappiKotigijangita apKotigijaugomajut pujulinut atjatuttinut Kinuagijaujut, tukisiniatsialutillo sukkoiKogajammangatik avataujunik inuillo piviannagijanginnik atuluaKattatunik.
- AkKisoillutik peKojaliannik sukkoijoKattailigasuannimut mallegatsaliolutillo pujulet atjatuttet apKutitsagilattanganik ingegavigilattanginillo Neofalap Labradoriollo imappingitigolattunik, Kaujigasuamut sunait avatanginnejut sukkutausagailluangummangata, avataujut pujuliojullo Kanok idluillioKogajammangatik sorlo sujoKagajappat, pinasoattiojunik, imak annetoKappagasuangimut avataujunik.
- KaujisautiKallutik sunanik KaujimajaukKungitunik avataujut pitjutigivlugit, pekKojalialiulutillo pitjutiKallutik Kimigotaujunik ilitagijaukKogasuamut kavamaujunut suliaKaviojunullo.
- KaujititsiKattalutik oKautjuiKattalutillonet Kanadame Coast Gardikunginnik Neofalamionillo Kanok pijoKalimmangat issomalutigijauKKotunik inunnut.

SuliagigiaKalauttangit EACNLMT-KUNIGATTAUJUT Kaujisagiak sukkoilaKoningit inosigijaulaKolittullo manna atuttauKattajut Kinuagijaujullo atjatuttet pujulet apKotigilattangit. KaujijoKaKatillugo Kimigotaulauttukut kitanemiot imappinginne, tapkoa katimajiojut KaujisautiKalautsunagiallanik suliaKautiKajutsaumangammik Kaujimatsiagasuamut illonainik sakKititaugajappata Kinuagijaujut atjatuttet pujulet sivuppiagutaulammangatik, imallo Kaujimajautsiagasuamut kajusiotjaugasuamullo akKitaullagillutik.

KaujisattoKalauKuk nunalinne Labradorime Strait of Belle Isle-limillo, oKausigigomajanget

KaujijoKagasuamut sunanik issomalutiKaluakKomangata Kanorlo isomaKaKaKomangata Labradorip Strait of Belle Isleliolo imappingagolippata atjatuttiojut ustsoalunnek. Kiosimalauttut tamatsominga piotsadlutik nutanillo Kaujititsilaummijut issomatsasiogutaujutsanik katimajiojunut.

- To review marine shipping proposals, at the request of the Canadian Coast Guard, so as to determine potential implications for the environment and for natural resource users.
- To recommend preventative measures and guidelines for shipping routes and ship movement in the waters surrounding Newfoundland and Labrador which recognize environmental sensitivities, environment-shipping interactions, and natural resource uses, and which minimize the environmental risks.
- To identify environmental information gaps, and to make recommendations on areas of research which should be addressed by government and/or industry.
- To advise and consult with the Canadian Coast Guard-Newfoundland Region on all matters of mutual concern.

The initial task of EACNLMT was to determine the potential environmental and socio-economic concerns and issues relating to existing and proposed tanker traffic. Based on a review of studies previously conducted for east coast waters, EACNLMT determined what additional work was needed to ensure that all potential issues would be addressed and resolved.

A SURVEY OF THE COMMUNITIES ON THE LABRADOR COAST and in the Strait of Belle Isle was conducted to obtain their input into issues and concerns associated with shipping oil and gas through the Labrador Sea and Strait of Belle Isle. The response to the survey was very positive and a number of new issues were identified for the consideration of EACNLMT.

As a follow-up to the survey, and in fulfilling its responsibility to consult and inform the public on issues related to the shipping of oil and gas through the Labrador Sea and Strait of Belle Isle, EACNLMT has prepared this information report for distribution to residents of the Labrador Coast and Strait of Belle Isle. The responses to issues and concerns identified by EACNLMT and by community residents were prepared by government, industry and public representatives and reflect the state of knowledge on these issues as of 1987. It should be noted that a number of issues remain unresolved and require further research and/or review.

Kamagigiallagasuamut Kimigotaulauttut, katimajiojullo sulliagigialingit Kaujititsigiamik inunnik illonainik Kaujijaugiallinik atjatuttet pujulet pikatalalippata Labradoriop Strait of Belle Isle-liollo Imappingitigut, una aKKisuktausimajok Kaujititsigasuamut sujoKalimangat Labradorimionut Strait of Belle Isle-limullo illengaluatillugo kavamakkunut, suliaKavviojunut katitjuKatigennello kivgatuttinginnut, tamakkoallo Kaujisattausimajut Kaujimausigijangititut 1987-niminit. KaujimajoKagiaKavok sulle ilangit issomagijaujut akKitaugesimanginginnik, KimigotaugiallagiaKammata/ubvalo Kaujisautigijaullutik.

A. Pujulet Atjatuttisait Kamagijaunitsangit

1. *Kinakkut aulatsiKattavat utsoalunnik atjatuttiojunik Labradorip Strait of Belle Isle-liollo Imappingitigolimmata?*

   Kanadame Coast Gardikut aulatsititauppalaijut tapkoa atjatoKalimmat utsoalunnek, mallegiaKagamek Kanadame Pujulet Atjattioninginnek mallegiaKamata Kanadame Pujuliligijinginnek. Tapsoma mallegatsaup iloane oKajok, aulatsinek pujulet aulanninginnik kamallagenatut Kitanimiot Kanadame Ingegautuligijaujut Mallegatsaliottiojut (taijaujut ECAREG),tapkoa mallegatsangit kissiane avittosimajut nunalimmiot mallegatsagijangit mallettaugialet imappinginne 19.3 kilameterinut Kaningitigijumut (12 miles).

   Tapkoa angeKatigejok - Coast Gardikut Mallegatsaliottingit Pujulet Atjatuttiojut Utsoalunnik Angijummagimmilo, Ulugiannatunik Atjatuttiojut Pujulinik Sekunillo Kamajiojut Kitane Kanadame taimatsainak mallegatsanik mallegiaKammijut akilittotaulugatik. Tapkoa mallegatsaujut Labradorip Immapinginnut illengajut, illengamidlutillo 321.8 kilameterinut Kaningitigijumut ogganiavioKattajup nunagijanganut.

   Arctikkime Pujuligijingeta Kamajillaginget pigiasijaulaujut saKKititaulaummata peKojaliatigut EARP-ikunut sivuppiagutigigasuamut, imak aulatsisiajoKagasuamut kamatsiajoKallunillo pujulet atjatuttiojut ingeganinginne Arctikkikut imappinginne tagganejunik 60 degreeinik. Tapkoa Aulatsijiojut Kamajingit nalaKattajut peKKojauligamek Kanok EARP-ikut katimajinginnit kamaKattajut atjatuttet pujulet issomagidlugit naukkomangatik asinginillo sorlo imak piviannujut attutaugajappata akigattotaunialilutik sukkojaugajapatallonet. Taimak kamajiKangitut Labradorip taggane seKinganillonet imappinginne kamajiKaKalungetut.

   Kanadame atjatuttet pujulet utsoalunnek Kimigojaulattut ingegiasiKagatik, angettaugiaKallutillo Kanoemangata Kanadame Coast Gardikut Pilukattailinitsangeta kamajillagijanginnut, saimmatiKajullo atjatuttet pujulet Kanadamiongungitumik mallegiaKalattut Kanadamiongungitut mallegatsanginnik.

A. Management of Shipping

1. *Who controls the shipping of oil and gas through the Labrador Sea and the Strait of Belle Isle?*

   The Canadian Coast Guard of the federal Department of Transport is the lead agency responsible for controlling the shipment of oil and gas in Canadian waters. The Coast Guard derives its authority from the Canada Shipping Act. Under this Act, shipping in the Labrador Sea and the Strait of Belle Isle is subject to the Eastern Canada Traffic Zone Regulations (ECAREG). These regulations, however, are only applicable to the territorial sea which extends to the 19.3 km (12 mile) limit.

   The Joint Industry-Coast Guard Guidelines for the Control of Oil Tankers and Bulk Chemical Carriers in Ice Control Zones of Eastern Canada apply within the 321.8 km (200 mile) economic zone and are adhered to on a voluntary basis.

   The Arctic Marine Transportation Authority, set up in response to recommendations from the Arctic Pilot Project Environmental Review Panel, controls and manages tanker traffic in Arctic waters north of 60 degrees N. The Authority receives advice from the Environmental Advisory Committee on Arctic Marine Transportation (EACAMT) on matters concerning tanker routing. This consultative process serves to minimize resource use conflicts and potential environmental disturbances. However, no equivalent Authority exists for the Labrador Sea and southern waters.

   Canadian tankers will be inspected and certified by Canadian Coast Guard-Ship Safety, and foreign-flag tankers will have to meet with the Non-Canadian Ships Compliance Regulations.

2. *Kanok pigiaKavat AngajoKangen pujulen Labradorip imappingagoKagateng?*

   Illonatik ilitagijaujut Kanadame atjatuttiojut illonainik mallegatsaujunik mallegiaKajut Kanadaup Coast Gardiojut Pilukattailigiamik Mallegatsanginnik.

   ItigajagiasiKagatik Kitanimiot Imappingitigut, pitgiaKavut atjatuttet ingeganitsangita nallonaikkutanganik, Kaujimajaugasuamut Kanoegijaunginimminik Kitanemiot Kanadame Kamajigijanginnut. Atjatuttiojuit AngajoKangit Kaujititsigialet sunatuinanik Kaujimajaugialinik pitjutilinnik pujulinga namlammangt, naukkolmmangat, sunait peKotingit piungitmmangata, sunait seKomiotisimamangata, sunanillo salumaittonik aniokKailamangata. Tatajut utsoalummut atjatuttiojut, pujulello usijut unuktualunnik ikoallasagaittunik ulugiannatunillo sunatuinnanik ingegajut sekuit akungagut, oKaKKojaummijut Kanok pilukatailigajammangta sekkokligutik.

3. *Kanok eKKanattigiva angettaugiaKaninget atjatuttet pujulet utsoalunnik usinningit Labradorip imappingine, atjigijaugunik pujuliojut ingeganingititut Arctikkiop imappingititun?*

   Okiongutillugo Labradorip imappingit atjigijaugalammata Arctikkiop imappingititut, atjigegiaKajut piniannigijaulattut atjatuttinut utsoalunnik tamagenne imappene.

   Tapkoa EACNLMT-ngujut akKisoisimajut tukkisinatsiatumik Arctikkimiot Kinuagijausimalauttomik Labradorip Inuit KatitsiKatigeninganut (LIA), atsisimalaummata Kinuagijaminik Mallegatsaliottet Kattimajinginnut Mallegatsamik C-75-imik. Arctikkimiut ilitagijauKataugajattut Labradorip taggamejok imappinganut seKinganut tikillutik, sekuit nunamut atajut Inunnut atuttauKattajunut pinasoavioKattajunullo ilitagijauKataullutik. Ogganiatuligijet Imappiligijello KatitsiKatigekkungit (DFO) sivuppialigutik sulliaKautiKannimine Arctikkime Imappine Omajungita Sukkutauttailiningita Mallegatsaliottinginnik taimatsainak Arctikkimiunik tukiKattisijut.

2. *What is required of a ship's owner and Captain before entering Labrador waters?*

   All certified Canadian tankers must comply with the appropriate Canadian Coast Guard-Ship Safety Regulations.

   Before entering waters of the Eastern Canada Traffic Zone, a ship must receive a traffic clearance from the Canadian Coast Guard. In obtaining clearance, the Captain must provide information concerning: the ship's destination and route, its deficiencies (not adequately equipped) and defects (equipment malfunctioning). In addition, any release of pollutants or damage must be reported.

   Full oil tankers and ships carrying chemicals in bulk which intend to travel through an ice control zone are also asked to provide information concerning safety in the ice.

3. *How important is it that the approval system for shipping oil and gas in Labrador waters be the same as it is for shipping in Arctic waters?*

   Because winter conditions in Labrador waters are comparable to those in the Arctic, it may be advantageous if approval systems for shipping oil and gas are similar in both areas.

   EACNLMT has endorsed the definition of Arctic which was proposed by the Labrador Inuit Association (LIA) in its submission to the Legislative Committee on Bill C-75. Under this definition, the Arctic would include waters from the north Labrador Sea to the southern extent of landfast sea ice and of Inuit use and occupancy. The Department of Fisheries and Oceans (DFO), through its lead in development of an Arctic Marine Conservation Strategy, has defined the Arctic in similar terms.

4. *Sunanik mallegatsaKagiaKavat pujulet atjatuttiojut Kanadamiongungitumik saimatiKajun?*

   Kanadamiongungitunik saimatiKijut atjatuttiojut mallegiaKajut Kanadamiongungitut Pujulet Mallegatsanginnik, imallo Kanadamiot atjatuttingititut mallegialet illonainik mallegatsanginnik.

4. *What requirements will there be for foreign-registered tankers not flying the Canadian flag?*

   Foreign-flag tankers must comply with the Non-Canadian Ships Compliance Regulations. These regulations require foreign-flag tankers to meet with the same standards as Canadian-registered tankers.

B. Pujulet Atjatuttet Aulanningit

1. *KatsiolaKat, Katsetullutillo, Kangallo atjatuttet pujulet ingegaKattalattun?*

   Ununningiguk pujulet ingegalattut issomagillugit Kanok utsoalunniajut Kanok angitigijomek utsoaluniamangata. Jariniguk Kaijune, imaKa atautsik maggollonet pujulek atautsime jarime ingegalattuk, aujaup nanigalangane ingegalutik, Arctikkimit Labradorip imappingagoKattalutik.

   UtsoalunniajoKagajappat Beaufortiop Imappingane, utsoalummillo atjatujoKagajappat seKKinganut, imaKa atautsik sekosiotialuk pujulik atuttaulattok 50,000-tinik barrelinik atautsime ovlume sanajoKappat. Taimaguk sulliaKattoKappat maggonik ubvalo sitamanut atjatuttinik ingegatoKalakKuk, illonatillo atjattutet utittalutik 15-naittolutik ingegaKattalattut jarime atautsime, Arctikkiop imappigullutik kitagut. Usingejallutik usilittuiligutik, sulliaKaligutillo utittaningit 22-ne 26-inillonet ovlune ingegaKattalattut, sukkainitsaulattulle okiongutillugo.

2. *Nallenut nunannut nukKaKattalattun, naukkoKattalakKalo atjatuttiojut pujulen jare nallugo?*

   Atjatuttet apKotigilattangit kitagolattut tagiokkoKattalutik, nunamullo Kanittigituinnalattut atjatuttet ailippata anigotiligonillonet Gulf of St. Lawrenceimit.

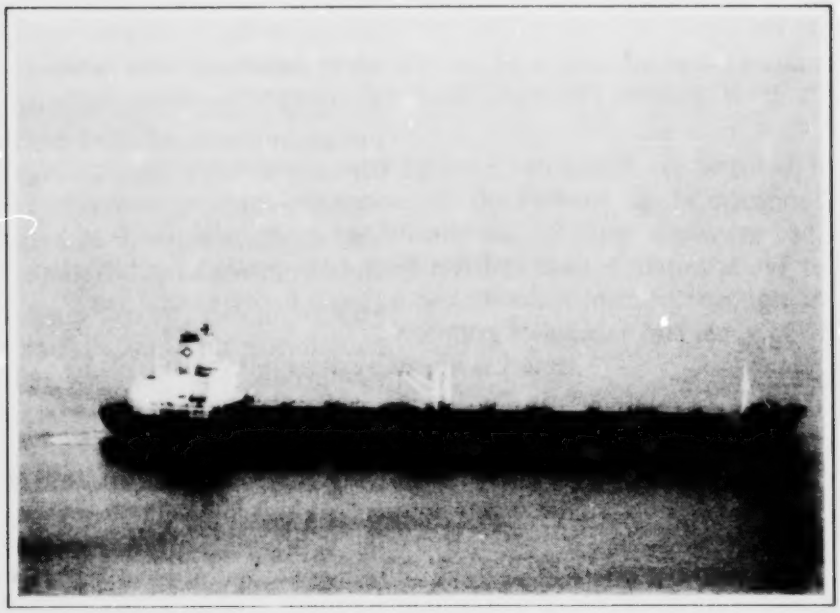
   Nallenut nunaliojonit nuKKaKattalamangammik sulle Kaujijausimalungitut, immaKaguk nukKaKattalattugaluat Come-By-Chansimut, Neofalame, Canso Straitimullonet, Nova Scotiame. Ikkatunitsakusulle atjatuttet pujulet nukKaKattalattut imaKa Montrealimut Quebec City-mullonet. EACNLMT-kut Kaujisimalittut nane nukKajutsaujoKammangatik pilukajoKagajappat kangidlune.

B. Tanker Movements

1. *What will be the frequency and timing of tanker movements?*

   The number of ships to be used in the future will depend on the amount of oil produced. For the next few years it is anticipated that one or two tankers per year, travelling in the late summer, will carry oil from the Arctic through the Labrador Sea.

   Assuming Beaufort oil is developed and assuming the oil is transported south by tanker, about one ice breaking tanker would be used for every 50,000 barrels of oil produced per day. A typical project would likely involve two to four tankers, with each tanker making about 15 round trips from the Arctic to the eastern seaboard in a year. Including loading, unloading and maintenance time, each round trip should take between 22 and 26 days, with the slower trips occurring in winter.



2. *What will the ports and the tanker routes be throughout the year?*

   Much of the tanker route along the east coast will be far offshore, more than 200 km (125 miles) from the Labrador coast and only closer to land where tankers head into or out of the Gulf of St. Lawrence.

   The ports where tankers would go have not been finalized, but one or both of the deep harbours of Come-by-Chance, Newfoundland and of Canso Strait, Nova Scotia are possible destinations. Shallower-draft vessels may go to ports such as Montreal or Quebec City.

   EACNLMT has identified the need to select emergency harbours along the coast.

3. *Atjatuttinik pujulinik kamajiKalkKa aulatsijutsanik illonainik atjatuttinik pujulining inegaKatalippata?*

   Kanadame Coast Gardikut kamajioppalaijut atjatuttet pujulet aulanningit kamagi giaKaKattagamigit inegalimmata, taimllo aulatsiKattajut malleluadlutik atudlutillo Kitnemiot Kanadame Ingegautuligijikkut Mallegatsanginnik (ECAREG). Sullelo pitaKattoKalungimat Kanoksiak atogiaKammangtik Kaujigatsanginnik ikajusitsanginnilo atjatuttinut pujulinut, mallegatsanik aulatsiKattajut atjatuttet pujulet aulanninginik, atudlutik Pujulet Ingeganitsangita Piosigijatsanginnik. Imk Kaninginitsamut 19.3 kilametersinut (12 maillinik) KngiotigiaKanginamik.

   Mnaligk, Labradorip Imappingane seKinganjuillo imappingine, atjigijaulungimijut Arctikkimiot Pujulingita Ingegautuligijingita Kamajingititut, imlle taipkoa kamaKattapalaigamik atjatuttinik pujulinik ingegaKattajunik 60 dgreesinik tagganimiongujunik.

4. *Sukkaningit atjatuttet pujulet kamagijaujutsauvat pujuliop Angajo-Kanganun, ikaligotik Strait of Belle Isliming? AllaKimmagilimmat tattopalimallonet ilangane nunak takutsaugonaimat mikijuit omiat takutsauKattangimata radarikkut.*

   Pujuliop AngajoKanga kamainnagialik pilukatailititsnallune umiamminik inumminik peKotiminillo. Amma "kamainnagia-Kammijok" tilijaugunillo Ingegautuligijet Kitanemiot Kamajinginnut sangujutsaunimminik sukkaninganillo, sorlo sukkailigiaKojaugunik nalagialet, AngajoKallo Kanok pigiaKagune imminik kamatsiagialik oujuliminek.

   Mikijuit ogganiatet omianget, nailuappata 20 metersinik nautsiomagialet imak Silatsoamiut Mallegatsaliottingita ApotitailligiaKanimik Imappine 1972-minittamik Mallegatsaliosimajut, nautsiomagiaKajut radariop tikkotinganik ilijausimagialello napajoKavinganut 4 metersinik imappimit napatillugo. Ingegasungogialik sanguligune 360 degreesinik oKalautikkulllo oKlaligune kiosngogiaKagajattuk nalautimmigut 9.3 GHZ-ikut (kioligune nalautimmigut napajunga takitigigialik 3.2 centimeteritut).

5. *OKalautikkut OKalainnajoKalakKa ogganniatet piniannigijanginneng atjatuttet pujulet ingeganingit pitjutigivlugen?*

   Tamanna akKitausungojuk ogganiatet KaujitiKattagasuamut pujulet nanemmangatik apKotigijangillo.

6. *Atjatuttiojut pujulet situndiKalattun ingegaliguting, sorlo Kitigaliminit unnuame, fiaramonut uvlakut ingegaligunik imappikut Strait of Belle Isle-likulluting?*

   Pujulet ikagegomaKattalattut imappikut Straitikut taikonatualigunik. Imalle, oKausigijaugonagajattut ikajugajakKullo nanetsiamangatik pujulet ikaligutik Straitikut ikajuttiKallutik

3. *Will there be a tanker control authority to regulate all tanker movements?*

   The Canadian Coast Guard has the authority and means to regulate tanker traffic largely through application of the Eastern Canada Traffic Zone Regulations (ECAREG). While there are no limits on provision of information or assistance to tankers, legislative control of tanker movements by way of Vessel Traffic Services, does not extend beyond the territorial sea limit of 19.3 km (12 miles).

   Currently, for the Labrador Sea and southern waters, there is no equivalent to the Arctic Marine Transportation Authority which manages tanker traffic north of 60 degrees N.

4. *Should the speed of the tankers be controlled by the Captain when sailing through the Strait of Belle Isle? In clear weather, and especially when visibility is poor, small fishing boats in the area sometimes cannot be seen on radar.*

   The Captain of a vessel is solely responsible for the safety of the vessel, its cargo and personnel. He is also the "man on the spot" and as such may be advised to adjust the vessel's course and speed. However, the final decision remains with the Captain.

   Small fishing vessels under 20 metres in length are required, by the International Regulations for the Preventing of Collisions at Sea 1972 (Canadian Modifications), to carry a passive radar reflector mounted on a mast not less than 4 metres above the water. The reflector must be capable of performing through 360 degrees of azimuth and responding to a radar frequency of 9.3 GHZ (corresponding wave length 3.2 cm).

5. *Will there be continuous reporting of tanker movements on fisherman's broadcast?*

   This can be easily arranged to keep fishermen informed of a ship's location and route.

6. *Will the tankers have special hours, such as between 12:00 midnight and 4:00 A.M., to manoeuver through the Strait of Belle Isle?*

   Tankers would want to transit the Strait immediately upon their approach. However, it would be possible to report the position of vessels approaching the Strait via Canadian Coast Guard Radio. In this way, local fishermen and hunters could be notified of the approach of tankers.

oKalautinganik Kanadame Coast Gardikut, ogganiatiojut pinasoattiojullo Kaujititaugonagasuamut Kanittoninginnik.

7. *Atjatuttiojut pujulet usigiaKajun utsoalunning Labradoriop Strait of Belle Isle-liollo imappingitigoliguting?*

Kanilligetsialungimata nunalet Arctikkime nagvaviosimajut utsoalummik, imaKa apKotigijaulattut atjatugiamik utsoalunnik Arctikkikut seKinganut ailigunik. North Amerikkakaup kitannejut nunalet utsoalummik pigomappamata unuttunillo inoKavatsuamat, taipkoa aullaiviogomajugaluat utsoalunnik. TamannauKolammat, utsoaluit usijaulattut Arctikkimit Labradoriop Strait of Belle Isle-liollo Imappingagullutik. Taikunagia-Kangikaluadlutik, taipkoa apKotitsagik Kaninnipaugajattuk Kanadaup Kitagut Amerikkaullo ingegagutik. Tamna apKotisanga apKotigijaunginnaKattaligettuk jare tamat unuttuvatsuanut asinginnut pujulinut atjatutiomijunut utsoalunnik.

7. *Is it necessary to ship oil and gas south through the Labrador Sea and the Strait of Belle Isle?*

Because of the extreme remoteness of parts of the Arctic where oil and gas have been found, it is probable that tankers will be used to transport oil and gas to southern markets. Since the east coast of North America has a high demand for oil and gas, by virtue of its large population and industrial base, it remains one of the more likely markets for these resources. Consequently, oil and gas will likely be shipped from the Arctic through the Labrador Sea and Strait of Belle Isle. Although tankers would not necessarily have to go this way, it is the shortest route to eastern Canada and the U.S., and therefore, is the most economical. Also, this route is one which is already travelled every year by hundreds of other commercial ships, many of which are carrying oil.

C. Atjatuttuojut Angininget Pilukattailigiakanningillo

1. *Kanok angitigilattut atajatuttet pujulialuin, Kanorlo sangusagaittigilttun?*

   Atjatuttet pujulet inunnut angijualunnigattaulattut takolautsimangitunut pujulinik. Taijaujuk Irving Arctic, pujulik ingegainatuk kitagut, angitigijuk 191 metersitut (628 feet) usigonatullo 295,000 barrelinik utsoalunnik. Taipkoa atuttaugomajut atjatuttet pujulet takitigilattut 305 metersinik (1,000 feet), usigonalattullo 1.5 miuliun barrelinik utsoalunnik usillugit atjigengitune illugusinne. Pujuliop illonanga atanga akKisuttausiasimajuk sungojualugiaKagame sekunik seKolluiligune, atugiaKalammigamilo maggonik angotialunnik sangoagutialunillo, Arctikkiop atjatuttingit sangutsiasngonitsaulttuk asinginnit atjattutinit atjigigalattanginnit, aglt mikinitsanit Arctikkimiot atjatuttingit nukKagonalttut sukkalippgaluallune imappimllune asingititut sukkaligaluallune, sorlo nuKaKallune angitigijutut pingasutut pujulittut. Sangugonalattuk kaivallasiasiallune imappime angitigijutut atautsitut pujulittut.

2. *Pujulet uktutaulattut, uktutauligunillo Kanok pilukattailinimmut mallegatsaKalattun?*

   Kanadame atjatuttiojut Kimigotaulattut Kanoegijaungininglllo kamagijaulattut Kanadame Coast Gardet Kimigotinginnut. Saimatilet Kanadamiongungitunik atjatuttiojut, Kimigotaulammijut Kanadaup Coast Gardikut Kimigotinginnut ubvalo Atjigengitunut Pujulinik Kamajinginnut Kimigotaullutik Kanadamiongungitunut, imak KaujijoKagasuamut malleninginnik Kanadame Mallegatsaliottinginnik. Kanadamioguk atjatuttello saimatiKijut asianik, atjatuttet mallegiaKajut sunatuinnanik mallegatsanik pilukattailiniop mitsanut, sorlo sanajaunningane, aKisuktauninginne peKotingit, pitattauligunillo sunatuinnanik peKotinik atuttaugatsanik ingegaligune amma salumaittuligutinganillo.

3. *Kanok atjatuttiojut sekosiotet, sekunillo nanemmangata nalunaijaisut pisungogiaKavan?*

   Sekosiotiojut atjatuttet pujulet Class 10-nionigattaujumik ilitagijautiKagiaKajut, imak ingegasungogiaKagamik atautsime jarime sekoltainnaittunik akungagogonalutik, itjutitigijunik 3 metersinik (10 feet) ingegaligunillo 2, ubvalo 3 natsinik. Ammalo sekukoligunik Kangagoligunik itjutigijikkut 31, 46-iollo meterinik (100-150 feet), taimallo sekukugiaKagunik KangigasuagiaKagajattut. Pujulet pitaKattitaulattut pimmagialunik peKotinik sekosiolippata Kaujimautit-sanginnik, Kanittoligutik (50 kilametersinik ubvalo sekonut tikiKagatik maggone situndine) Kaningitogunillo (1,000 kilametersinik ubvalo situndine 12-ine tikikKagatik sekunut). Pujulet peKotingit akKisuttaulattut pitallugit Kaujimagasuamut nane

C. Tanker Specifications and Safety Concerns

1. *What size will the tankers be, and how manoeuverable will they be?*

   Oil tankers usually look big to people who have never been around ships. The "M.V. Irving Arctic", a tanker that frequently sails the east coast, is 191 metres (628 feet) long and can carry about 295,000 barrels of oil. The proposed Arctic tankers will be about 305 metres (1,000 feet) long and will be able to carry 1.5 million barrels of oil in a series of compartments.

   Because of the specialized hull design, the enormous amount of extra power needed for ice breaking, and the use of two independent propulsion systems and rudders, the proposed Arctic tankers will be far more manoeuverable than conventional tankers of a similar and even smaller size. An Arctic tanker will be able to come to a full stop from cruising speed in open water in about one third of the distance needed for a conventional ship of equal size; for example, within 3 ship lengths. The turning circle for both conventional and Arctic tankers in open water is about one ship-length.

2. *Will the tankers be tested, and if so, what safety requirements will they have to meet?*

   Canadian tankers will be inspected and certified by Canadian Coast Guard-Ship Safety.

   Foreign-flag tankers will also be inspected by Canadian Coast Guard-Ship Safety Inspectors in Canada, or by Classification Society Inspectors outside of Canada, to ensure that the Non-Canadian Ships Compliance Regulations are met.

   In brief, Canadian and foreign-flag tankers will have to meet

pujuliKagiallamangat pitaKammilutik Kaujimautitsaminik Kanok Kaningitigimmangat sukutsianemangatillo assingit pujulet, ammalo pitaKammilutik atjiliogisumik satalaittikut. Tamakkoa illonatik manna atuttauKattaligettut Beaufortiop Imappingine. Tapkoa Kaujimatitsenalattut ovlu navlugo unnualo Kaujigasngullutik Kanotuinnak silaKagaluappat.

4. *Tapkoa atjatuttet pujulet Kanok piotigivat asimitut pujuliojutun atuttaulattut Labradorip Strait of Belle Isle-liollo Imappingitigun?*

Issomalutigijauluattuguk atjatuttet pujulet ingegalippata pilukajokagajappat utsoalummik asikKiniallutik. Illonatiguk pilukajut inummut pijauKattajut illonatillo utsoalummik asikKiKattalungitut, imak sanaviosimagamioluak pilukattailigiamik peKotinnut. Sanajaulattut jarine Kaijone atjatuttisait pujulet sungonippaulapalaijut pilukattailisngolutillo illonainit silatsoamionit. Manna pujulet peKotigingitanginnik pitattotaulappalaijut. Okoa pujulet takutsaujut peKotigijangit atuttauKattajut manna Arctikkime:

- Sekosiotinnik peKotilet jare nadlugo atuttausut ingegaligamik Northwestiop Imappingagut.
- Itjujualummik maggoilingajumik silatilet atangalo maggoilingajunik itjunilik pilukagajagunik utsoalummik asikKitailigasuamut apotiKajoKagajappat nunammollonet ikkagijoKagajappat.
- UtsoaluKautet pujuliop iloanejut, tapkoa sulitsiamangatik Kaujimajaulungitut imak sorlo pilukammagijoKappat natanginne saniganginillo pujulet akKisuttausiasimajut Silatsoamiut Imappiligijingata KatitsiKatigenninginnut (IMO).
- Ingmigulingajunik utsoaluKautinik imaKautinillo pitaKalattut utsoaluk imallo akulligettitailigasuamut.
- Ingmigulingajut itijumut utsoalunnianimmut pumppinginik pitaKallutik illonatik utsoaluKautiojut, kuffikut utsoalunnik iliukKaisiagasuamut pujulinut peKotinillo natsajaminik pilukaittailigasuamut.
- IlliukKailutik utsoalunnik ikiukKaisiagasuamut atjatuttiojunut ikoallaitailijoKagasuamut Kattailititsigasuamullo sujoKagajappat.
- IliukKaigonalutik usilittuigonalutillo utsoalunnik nalletuinnanit seKomisimajunit iliukKalugit seKomisimangitunut utsoaluKautinut.
- PitaKalammijut nutanik ingegautitsangita peKotitsanginnik aputitailijoKagasuamullo atullutik sungojualunnik nalunaikkotaujunik Kaujititsisunik nanemmangatik pujulet.
- Piojualunnik pujuliKallutik sangutsiatsnik ilungittuligutik aKKotingit ingega-tillugit pitsakittuagulammik.
- Maggonik aKKotiKallutik sungojualunnik.

requirements for a variety of safety-related components including the construction, fitting and equipping of both navigational devices and pollution prevention equipment.

3. *What will be the ice breaking and iceberg detection capabilities of the tankers?*

   Ice breaking tankers will have an Arctic Class 10 rating, which means they will be able to travel through level, first-year ice up to 3 metres (10 feet) thick at a continuous speed of 2 to 3 knots. They will also be able to break through ice pressure ridges in the range of 31 to 46 metres (100 to 150 feet) thick if required. The preferable choice, however, would be to avoid difficult ice conditions and icebergs.

   The tankers will be equipped with the most sophisticated ice detection systems available, both for short range (50 km or two hours sailing) and for long range (1,000 km or 12 hours to several days sailing). Detection systems would include: shipboard radar and sonar, aircraft equipped with side looking airborne radar (SLAR) and synthetic aperture radar (SAR), and satellite photography. This combination of systems, already used in the Beaufort Sea, will provide detailed information around the clock, regardless of weather conditions.

4. *How do these tankers compare with existing tankers using the Labrador Sea and the Strait of Belle Isle?*

   The main concern related to tanker traffic is the potential for an accident resulting in an oil spill. Most accidents are the consequence of human error. In the case of tankers, the possibility of an accident resulting in an oil spill is low, particularly if additional safety factors have been built into the system.

   The proposed Arctic tankers of the future will be among the strongest and safest tankers ever operated anywhere in the world. They will have built into them a number of features not found in most ships currently travelling the east coast.

   The main features of the future Arctic tankers which are distinct from conventional tankers include:

   - Ice breaking capabilities to allow year-round travel through the Northwest Passage.
   - A double-sided shell and double-bottomed hull structure to minimize the risks of oil spillage in case of collision or grounding.
   - Oil tanks located in-board, beyond the theoretical limits of the worst damage assumptions for ship bottoms and sides provided by the International Maritime Organization (IMO).
   - Separate oil and ballast water tanks so that oil does not come in contact with clean ballast water.

- "KaujititsiotiKallutik sunaliame "angajoKap illugusingane Kaujimatsiagasuamut piongilikKolittunik pilukajunillonet pujuliop atanejunik peKotinek.

5. *Kanok Kaujimmattigivan sekuit, silak, imappijiollo piosigiKattajanginning Labradorime Strait of Belle Isleimillo, nammagijaulaKallo pujulinut ingegavioliguting jare navlugo?*

SEKUIT

Angijuppangitut angijualuillo, mikinigullo sekuit Kaujimajautsiatut. Labradorip sekogiKattatanget tikiKattajut Belle Isle-limut Januaraup sivollingane woggingane. 1963-1974-raullo akongane, sekusimalaukKullo tagvainaunippak December 4-rame, sekkottailinippaudlunillo January 29-name. SekuigutiKattapalaivuk ilangane Juniop sivolliane woggingane, sekuisagainnipauKattavullo sekuigutitailiKattadlunillo ukunane takKine May 7-nime, Juli 19-namillo, jare tamkask. Ovlu tamat sekuit kamagijaudlutik, sekonik Kamajiojunut Kimigotauligamik, imak KaujiKattajut sekunik Labradorip seKinganut tikidlutik Strait of Belle Isle-limut. Kanok itjutigimmangatik sekuit Kaujijautsiagonangitut, imak takojaugamik tungujuttauningit takkonataudlutik tingijukkut. Avanigialle, Kaujititsigiak Kanok unuttigimmangatik nalunaKattagivuk ikinnisanik tingijoKaKattamat tavonajunik. Jariolauttune, satalittikut sekunik Kimigoligamik pioluaKattalauttut Kaujigonalaummata Kanok sekuttigiKammangat. NuvujaKagonaimaimmat illonainik sekunik takotitsigonatut, radarinik Kinugammijut (SAR) atugiamut Europpimiot Kanadamiollo, satalittingitigut, tapkoa nuvujanut ulapitauKattalungimannik, imallo oKasimappalaijut KaujititsiKattalaniminik nane sekuKammangat Kanorlo aulattigimmangatik ovlu tamat. Taipkoaguk satalaitek Kummoatitaulattuk, 1989-name Yuropimiut, 1991-namilo Kanadame. Labradorip Imappingita Koatsnattokgutingagut satalaittek Kaujititsigonalattuk sekuit nanemangatik Kanorlo angitigimngatik. Nuvujanuguk agviataukKolulangitut ovlu tamallo Kaujititsigonalattut. Kanoelingatsiamangatik ilangane Kaujititsigonalulangitut Kaningitigigunik 50 kilametersinik nunammit. Tapkoa Koatsnatukut Kaujisautiojok manna sulle atuttaulungituk, atuttaugonnanegillo manna sulliagijaugasuajugaluak tagvainaunisak KaujimajokaKattagasuamut. Kissiane sekoKalimmat kamagiak sulle atuKattajut aggakut sulliagidlugit nanemmangatik Kaujisaligamik silallo Kanoelingalammangatik Kaujisammidlutik. Sekunik kamautitsiaKaligutik, akunionnisak kamagonalattut piosiomillutillo KaujititsiKat-tagiamik nutngonitsanik peKotiKaligunik.

SILAK

Siagonittait Kaujijausimajut manna atuttauKattajut pitjutilet Labradorip silagiKattasimajanginnik ukunangat sitamanit tigollatausimajut: Imappimit Silasiutiligijinit (OWS) Labradorip

- Independent, deep-well oil pumping systems for each tank to reduce in-hull piping and to allow better and safer cargo handling.
- Inert gas systems for oil cargo tanks to reduce fire and explosion hazards.
- Ability to contain and pump oil from any damaged compartments to undamaged ballast tanks.
- Sophisticated navigation and collision avoidance systems using the integration of multi-sensor inputs.
- Excellent vessel manoeuverability at full power and maximum rudder angles.
- Two independent propulsion systems and rudders.
- "Real-time" bridge readout of hull-mounted instrumentation to monitor stresses in critical parts of the hull.

5. *How much is known about the sea ice, weather and sea conditions in the Labrador Sea and the Strait of Belle Isle, and is it enough for safe ship movement throughout the year?*

SEA ICE

Average, maximum and minimum extents of sea ice are well known. The Labrador pack ice generally reaches Belle Isle by the first week in January. During the period 1963-74, the earliest appearance of ice was December 4, while the latest was January 29. The average date of disappearance of ice is about the first week in June, while the earliest and latest dates of clearing were May 7 and July 19 respectively.

Daily ice charts, produced by Ice Forecast Central of the Atmospheric Environment Service, provide information on areal ice extent over the southern Labrador Shelf and Strait of Belle Isle. Information on ice thickness is less reliable, being based largely on visual identification according to colour as seen from aircraft. Further north, information on ice distribution becomes less reliable because fewer aircraft flights are made into these regions.

In recent years, satellite information collection techniques have provided valuable information on ice conditions in inaccessible regions. Through cloud free periods these techniques can define the true coverage of ice. Synthetic Aperture Radar (SAR), proposed for both European and Canadian satellites, is not affected by cloud cover and promises to provide highly detailed information on ice distribution and ice motion on a regular basis. The proposed launch dates are 1989 (European) and 1991 (Canadian). Through the Labrador Sea microwave system, sensors aboard these satellites will provide information on ice concentration and ice type. These sensors are not severely impeded by cloud and can provide information at regular intervals. Distortion makes the data unreliable close to land (50 km). Currently, microwave and SAR data are not used for

KiKKangata Imappinganit; pujulet allaKotinginnit; silasiotiligijinginnit Labradorip nunalimmionginnit, mannagulalo satalitinit. Tamakoa Kaujijausimajut takkotitsigonajut Kanok silaKasungommangat.

Jare nakasadlugo, pujuliKatsiaKattalungelak Labradoriop Imappingane; tavatoalle KaujimajoKatsialungelak Kanok silaKalaKomangat, apKonatsaoallo nakit piKattamangatik tikiKagatik Labradorip Imappinginnut. Tapkoa maggok Kaujijausimajuk Kaujititsisiagonalungituk Kanok silaKalammangat. Ilanganille satalaittet KaujititsiKattajut Kaujimajaungitunik, tavatoalliguk KaujitisiKattalungitut ilanginnik Kaujimajaulungitunik nunamme. Tamannaguk piosiomilattuk 1990-nane piosiomippata Kaujisautiojut.

IMAPPET KANOELINGANNINGET

Silatut imappet kamagijauKattajut Kimigotaudlutillo, imappet Kanok aulaKattamangatik tigollatauKattajut tamagennut silaligijinnut omiannut Bravo-me pujulinullo ingegaKatajunut imappine. Tapkoa imappet Kimigotausimalauttut 1984-rame Kaujigasuamut Kanok angitigisngomangtik mallet Tagganejune Atlantikkime. Kimiguniosimalauttuk takkotitsilauttuk ekKanamagittumik, sorlo mallet angijualugamik mikilliomiKattamangatik pngmmit anugilimmat itigajaligamik Labradorip Imappinganut tikidlutik Tagganut Atlantikkiop Imappisuanganut. Kimigudlutik mallinik, sorlo silamut sanajaugamik, kamagijautsiagiaKainnatut pujulinut ingeganimine tvuna. Okiongutillugulle nalunaKattavut silait.

Ammalo, satalaittet tungavitsangit 1990-tigalanne KaujimatitsisiaKattalalittut silamik mallelo Kanoelingamangatik, imallo pitagijaugonasungolalittut KimiKotaugonanialilutik jaugonanialilutillo kinakkotuinnanut Kaujigatsautillugit.

6. *ImappikujoKalippat allaKotiojut nammagijaugonalaKat pilukattautailigasuannimun Labradorip Imappinginne Strait of Belle Islelimillo?*

ApKotigijaugomajok Davis Straittimit taggagullo Strait of Belle Isle-likut itijualuppalaijuk, taimaimat apKotigijaugiamik pujulinut Kanoelulangituk. Taimna apKotigijaugomajuk Kimigotausimalauttuk Kanadame Nunangualigjinginnut 1972, 1978-tiolli akungane, KimigotiKadlutik Kaningitigijumik 8-tiop 32-tullo kilameterimik (5-inik 20 mailsiolo akungane) (atjinguak 1). Tamna takojaugajattuk atjingoamme 4700-time nunangoaliotausimajume 1:1,000,00-time Silatsoamiollo nunangoangane 1:3,500,00-time. Tapkoa nunangoat piojujutsait imappine ingegajunut.

AgvitavioKattajut taggagut Strait of Belle Isle-liop Kimigotaugiallasimajovinet 1980-tiop pigianningane, nutallo nunangoat pijagettaulattut 1989-90-galame. Manna atuttauKattajut nunangoat akKigiattausimalittut Kaujigatsaudlutik Omiatutinut.

Ikkatukkoligutik Imappine, pujulet ikajutaugomagunik Labrad-

operational purposes. Consequently, considerable effort and resources are needed to ensure that these data can be made available to users as quickly as possible.

Short term ice forecasting is still largely done using manual techniques, and therefore, requires reliable weather forecasts. Before reliable forecasts for longer periods can be made, additional information and improved forecasting techniques, such as modeling, are required.

WEATHER

Historical information, used to describe the climatology of the Labrador Sea, is mainly from four sources: Offshore Weather Station (OWS) Bravo in the central Labrador Sea; ship logs; reporting stations on the Labrador Coast; and more recently, satellites. This information allows reasonable estimates of the average weather conditions.

For much of the year there are very few ships in the Labrador Sea; consequently, there is very little information to support weather predictions. Also, there is not much information from some areas across which storms travel before reaching the Labrador Sea. These two factors undoubtedly have a negative effect on the quality of the forecasts. To an extent, satellite information fills in some of the gaps but it does not entirely offset the negative effects of the scarcity of surface reports. This may improve in the 1990s as remote sensing improves.

SEA CONDITIONS

As is the case with weather observations, estimates of sea conditions have been collected by the weather ship stationed at Bravo and by ships travelling within the area. These observations were analyzed in 1984 as part of a compilation of the wave climate of the North Atlantic. The analysis showed that important wave heights decrease in a north-westerly direction into the Labrador Sea from the central North Atlantic. Observations of waves, like those of weather, are presently dependent on ships being in the area. Thus, observations are sparse during the winter season.

Again, satellite-based systems in the 1990s will provide enhanced weather and wave data if the resources are available for analyzing and distributing such information.

6. *Are the present nautical charts adequate for safe shipping in the Labrador Sea and Strait of Belle Isle?*

The proposed route, from Davis Strait to the northern approaches of Strait of Belle Isle, is deep and should not be a navigational problem. This route was surveyed by the Canadian Hydrographic Service between 1972 and 1978 with survey line spacing ranging between 8 and 32 km (5 and 20 miles) (Fig. 1). This area is on Chart 4700 at a scale of

orime, iniKaluagajattut imappinik Kimigotiujunik Kimigotigisimalauttanginne 5-inik mailinik Kaningitigijume nunammit (atjinguak 1), imak ikkagunik poigusimagasuangimut nunangoane. Kaninnisaujunik nunammit imappet ilangit Kimigotausimalungituguk piloattumik atajunik nunammut itijunnisaupalaigamik ilanginnit (Atjingoak 1). Mnnamunugk, nunangoat kKisuttausimajut ikkatunejut piojppalaingitut taimaimat itijume ingegaliniojunut atuttaujutsaulungitut. Tpkoa piojungitut Kaujigatsaulattut sivolliotaullutik.

Ogganiatuligijet Imappiligijello KatitsiKatigennikungit Neofalamiot, manna Kinijappalaijut sulliaKattisannik peKotitsanillo atuttaugatsanik nunalet nunangoasattataugasuamut nunangata akungane kamagijaugialinne.

7. *Kanok iliktigisimalakKa pujuliop AngajoKanga kipalungillo ingegakataligunik Labradorip Strait of Belle Isle-liolo imappingitigun?*

Tamakkoa imappiojut nalonasungogaluadlutik ingegavioligamik pujulimmiunut Kanok silakasungommangatik, asilluasiagijaulungitut manna ingegavioKattajutut Taggane Atlantikkime ilangitalo imappet silatsoamejut. Angijualuit atjatuttet pujulet pijagiakKotujutsiolulangitut tagvunaligunik apKotigilattamigut, pujuliollo angajoKanga kipalungillo atulattut pujullimmik sekosiotialummik silatsoamionullo atuttauKattajutut. AngajoKalagiojut pujulinnejutsait tigollataulattut Kaujimatsiatunut tigollaijiolattunik sulliaKattisannik.

8. *Utsoalunnik asikKijoKagajakKoKa atjatuttaujunik Labradorip Imappingitigun pijunik Arctikkimin (sorlo Davis Straitimin)?*

Utsoalummiguk asikKijoKagiaKadlatuinnavuk, tavatoalliguk Arctikkimiot pujulingit asikKilukKolalungitut, imak mikinitsaujut pujulet atjatuttiojut tavunaKattajut.

9. *Pujulet atjatuttet sukkaisagiaKalattun Strait of Belle Islelikoliguting?*

Mallegatsanget pujulet aulanninget Strait of Belle Islelikoligutik kamagijaugiaKalattut Kanadaup Coast Gardinginnut, tapkoa aulatsiKattamata Kitanemiot Kanadame Ingegautuligijinginnut Mallegatsaligijingeta (ECAREG), kamgijaummidlotik Omiat Ingeganingeta SuliaKattinginnut Ikajuktinginnulo.

IngegaKatalippatalo ingegavigigiaKangitaminut, pujulet oKautijauKattalattut kamatsiaKojaullutik ingegavigijammiguligunik: takkonasiamangatik oKagialet, KaujimakKolugit sekunut apugajanningit ammajune imappine, tikiajaKattaningit Kangaulimmat sekuit, pujuliviniKanningalo ingegavigijamine. Taimak Kaujititaugunik pujulet sukkailiKattatut pujuliluviniKappat sorlo Strait of Belle Isle-lime.

1:1,000,000 and International Chart 5001 at a scale of 1:3,500,000. These charts are adequate for offshore navigation.

Northern approaches to Strait of Belle Isle were re-surveyed in the early 1980s and it is anticipated new charts will be available by 1989-90. Existing charts have been updated through Notices to Mariners.

Inshore, if a vessel requires refuge along the Labrador Coast it will normally be in areas where the hydrographic surveys were undertaken with only 8 km (5 mile) spacing (Fig. 1), which is insufficient to ensure that all shoals are missed. Closer inshore, there is a band of virtually unsurveyed water connecting the deeper offshore waters to coastal harbours and inside routes (Fig. 1). In summary, navigational charts for inshore areas are poor and are inadequate for deep-draft shipping. These deficiencies will be addressed as resources and priorities permit. The Department of Fisheries and Oceans-Newfoundland Region, is now acquiring the necessary staff and equipment to undertake coastal charting within its area of responsibility.

7. *How experienced will the Captain and crew be in sailing waters such as the Labrador Sea and the Strait of Belle Isle?*

   Although conditions in this area can be challenging for mariners, the extreme conditions experienced here would not be significantly different from those experienced in other North Atlantic shipping routes or in some other parts of the world. Large tankers, such as those proposed, would have little difficulty in travelling this route throughout the year. Captains and crews would have extensive ice breaking and world-wide tanker operations experience. The key marine personnel would be selected from among the most qualified people in their field.

8. *What is the possibility of an oil spill, from oil and gas shipments along the Labrador Coast, originating in the Arctic (e.g. Davis Strait)?*

   The possibility of an oil spill will always exist. However, the risk of a spill from a proposed Arctic tanker is much lower than that associated with any of the more conventional tankers now travelling along the coast.

9. *Will tankers have to slow down while passing through the Strait of Belle Isle?*

   Regulation of tanker movements through the Strait of Belle Isle is the responsibility of the Canadian Coast Guard which administers the Eastern Canadian Traffic Zone Regulations (ECAREG) through provision of Vessel Traffic Services and Systems.

   When travelling the areas in question, vessels will be advised to

10. *Pujuliop AngajoKanga takogonalattung inummik sekumcjuming ingegaligutik Strait of Belle Isle-likun?*

Illonagalanganiguk inummik takojutsauKattaniattut. Tavatoalliguk sangusagaigunalunginamik toavigonnalunginamillo sekosioligamik, inuit sekomejut kamatsiajutsaujut sekosiotialuit pujulet pinasoavigijamminekKomangammik.

11. *Pujulet atjatuttet nautsiomalatut piojummagialunnik peKotimik akunganejoKammangat pujulet mikijunik ogganiatiojut omianginneng?*

Aahaguuk. Pujuliguk atjatuttet nutanik pimmagialunnik peKotiKalattut. PiojugajakKoguk illonatik ogganiatet omiangit nalautiKagunik radariKagunillo Kaujimajaugasuamut pujulinut apKotingineninginnik.

Pinasoatteguk amma nalautiKajutsaumijut napajulinnik radarinillonet skidommine aullasimaviminillonet. Taimaittonik pitaKagonangikunik, piodlagajattuguk Kanoettunikiak pinasoattet pitaKagajagunik, Kaujititaujutsaujullo Kanadaup Coast Gardikunginnik pujulet atjatuttiojut Kanittolippata nunanginnut.

12. *Atjatuttet pujulet ingegagonnalaKan apKotigijaunginnaKattajukkun, anogimmut ingeganinnullo tamaunaungitotinialivluting?*

Angijoalugaluamut nutagalunillo peKKotiKagamek pimmagialunnek, pujulialuit Kanoelulangetut tagavanitsainagiamut apKotigijaunginnatukkoligutik.

proceed carefully with attention to: visibility, the possibility of collision with random ice in open water, the prevailing ice conditions, and traffic density. This will often result in ships slowing down in busy areas such as the Strait of Belle Isle.

10. *Will the ship's Captain be able to see a person on the ice when sailing through the Strait of Belle Isle?*

    In most, but in not all cases, a person would be seen. However, because tankers cannot turn sharply or rapidly in ice, it will be important for people on the ice to be watchful in the presence of an ice breaking tanker.

11. *Will the tankers be equipped with high-tech equipment capable of detecting small fishing boats?*

    Arctic tankers will have the latest detection equipment. It would also be useful for all fishing vessels to be equipped with radio or radar beacons to ensure detection by the tankers.

    Hunting parties should have radio transmitters or radar beacons attached to their snowmobiles or in their camps. If these precautions are not possible, it would be advisable that some means of communication between hunters and the Canadian Coast Guard be established while tankers are in the area.

12. *Will tankers be able to navigate within designated routes and not be thrown off course by winds and tides?*

    Because of their large size and sophisticated navigational equipment, tankers will have no difficulty staying within the established routes.

D. Pujulet Pilukagajanningit: Summat, Kanok Pijokagajanninga, Kanorlo Kamagijausagaigajanninga

1. *Pujulik pilukagajappat (sorlo apugajappat sekumut, seKomiotigajagune ubvalo nunammut ikkagigajagune), utsoalummillo asikKigajangikkune, Kanok pijoKagajakKa?*

   Arctikkimiok pujulik "seKomiotigajappat" nukKangagajattuk imappime ubvalo sukkaitullune ingegagajattuk akKitaunitsaminik utakKilune. "SeKomiotinniguk" imak tukilik sorlo ikomangita iggavingit nukKagajappata ubvalo iggavingit ingegatitsijut pujulimmik nukKainagajappata. Taggale, illonatik pujulet iggaviKammata ikomamminut unuttunillo illugusiKammata, angutiKammatalo, pujulik sekKomiotilluasiagajalungituk. Ammalo, pujulet ingegainasungommata itijualunne imappine, ikkagigajakKolungitut. Ikkagigajappale (sorlo Strait of belle Islelime) ilainnanga ikkagigajattuk. Tamannaugajappaguk, peKotingit, utsoalungit imaillonet usijangit ikkagisimagune nujaugajattut ikkagisimajup ininganut aKoanungak iliokKataullutik pujulik puttagiasigajattuk. Natanga pilukattaugajappat apunnigune sekommut, pujuliop kamajingit Kimigogajattut naukkut pilukammangat. PilukakKallune utsoalummillo asikKiniakKopat, utsoaluit atjatuttaujut pilukasimajumit pumpitaugajattut asinginnut illugusinut iliokKataunganialilutik utsoaluKangitunut pilukasimangitunut. Pujulik pilukasimagaluallune nukKanialungituk aivigigialimminut kajusigiammut.

   Tavatoalle Utsoalummik asikKigajagutik illonainik pinianigigiaKajaminik suliaKautiKagiaKalet. Imak utsoaluk asiKisimajuk kalitaugasuangimut assinginnut imappinut ingeganimine. Taimaigaluatillugo, Kanadaup Coast Gardikunit angittaugiaKajut manetuinnak nuKKainagajagune, ubvalo sekKomiotigajagune ekKanamaginippangit iggavingit aKotingalonet apusimagajagune. Taimaigajappat, Kanadame Coast Gardikungit tagvainak KimigogiaKagajattut oKautjuiniallutik Kanok pigiaKammangatik allat nukKangakKojaugajagamik, ammalo oKautijaugajammijut nallenut nunannut kajuisikKojaummangatik, imak asiagut imappitigugasuangimut asinginnilonet. Ammalo Kanadame Coast Gardikut kamagajammijut ingeganingane pujuliop imak sukkuitailititsigasuamut avatanik Kanittigijunik 200 mailsinik nunammit (321 kilometrsinik).

2. *Pujulik atjatuttik pilukagajappat asikKilunillo utsoalummik:*

   (a) namut anugimut ingeganinullo utsoaluk tittauKagajakKa Labradorip Strait of Belle Isle-liollo akungane?

   ApKotitsak atuttaugomajuk Labradorip imappingagut itijummelattuk imappime ingiulinninga pitsakittuagulaujuk taimatsainallo ovlu tamat pinianniKaKattajuk. Imappiop ingeganingit utsoalummik itajattisilalungituk utsoalummik asikKijoKagajappat Labradorip imappinginne. Labradorio-

D. Tanker Damage: Causes, Effects and Response

1. *If a tanker was damaged (e.g. collided with an iceberg, broke down or went aground), but no oil spilled, what would be done?*

   If an Arctic tanker "broke down" it would either sit in the water or keep cruising until the necessary repairs were made. A "break down" would normally mean that all electrical power went off or that the engines driving the ship stopped. However, since these tankers would have several independent sources of electrical power and several propulsion units, propellers and rudders, it would be unlikely that a tanker would break down completely.

   Since tankers would normally be travelling in very deep water far offshore, it would be improbable that they would run aground. If a tanker was to run aground, such as in the Strait of Belle Isle, only a part of the ship would likely be grounded. In that case, cargo, such as oil or water, would be moved from the grounded section to empty compartments near the stern, and the ship refloated.

   If a tanker collided with an iceberg, the ship's personnel would check for damage. If the damage threatened to cause an oil spill, oil cargo from tanks near the damaged area would be pumped into empty compartments away from the damaged site. Even in a damaged state, the tanker could continue to its port of destination in virtually all cases. However, before proceeding, all necessary steps would be taken to ensure that oil was not spilled during the rest of the voyage.

   A ship must obtain approval to proceed from Canadian Coast Guard after being stranded or stopped because of a break down of the main propulsion machinery or steering gear, or after being involved in a collision. In these circumstances, Canadian Coast Guard has the option of conducting an on-site inspection and of establishing conditions for a clearance to proceed. Permission for the ship to continue its voyage may be withheld, or the ship may be instructed to proceed to any given port, to avoid certain waters, or to adhere to other such conditions. In addition, Canadian Coast Guard may exercise control of the ship if a threat to the environment exists to the extent of 321.8 km (200 miles).

2. *If a tanker was damaged and oil spilled:*

   (a) *Where would the oil likely be carried by winds and currents from various locations in the Labrador Sea and the Strait of Belle Isle?*

   The proposed operational corridor in the Labrador Sea is well offshore, on the shelf and slope regions where ocean circulation is weak and generally clockwise. The ocean currents alone are unlikely to cause oil spilled in the Labrador Sea to come ashore.

guk ingeganingit seKinimmoatitsinglttut 50, 80 kilometersinillo sukkatigillune ovlume atautsime (30/50 mailsinik). Labradorip Imappingane apKotigijaugomajuk imappimelagijuk ikKanginne uvingajanginnilo imappiop ingeganinga pitsakittpalaimmat aulanningalo silaup kaivaluaKattajok situnditut. Imappioguk aulanninga piutsatujugaluallutik utsoalimmik asikKititsigonalalungitut. Utsoalummik asikKijoKagajappat Labradorip ikKanginne, Labradorip ingeganingita anugingit imappingatalo aulaningit ikkagingita ininginnut utsoaluit aingagajattut, ingeganingillo natsagonalattut utsoalummik sukkatigillutik 10-20 kilometersinik (6-12 mailsine) atautsime ovlume. Belle Isle Straitime, ingeganit itigajaKatauKattatut ululimmat tinilimmalonet anigutiniadlutik Gulf of St.Lawrensikudlutik silanginnik ingeganinginnillo maledlutik Straitimik. Imappikuligamik Straitikut sekualuit ikageKattajugaluat naukkutuinadlutik Gulf of St. LawrensikukKagatik Neofalalo ikkagitigukKagatik. Utsoaluit anuginut ingegatitauKattajut ingeganullo. Kaujimajaujuk Kanok piKatamangatik utsoaluit aulaKattaningit sorlo anugiop pitsatuningagut 3 persentimik sukatigidlutik aulatitauKattajuk. Imallo anugik 20 metersinik atautsime sekundime anugippat (45 mailsine situndime) aulatitsigonatuk utsoalummik 50 kilametersinut (30-tine mailsine) atautsime ovlume. Uttugautausimajune utsoalummik asikKitoKagajappat ilanginne utsoalunniaviogomajune Labradorime, imallo Kaujisimajut, utsoalummiguk asikKitoKagajappat nunaliagajattuk mikinitsamik. 20 percentime.

Kanittomettonullo asikKigajappata utsoalummik nunaup killingit sukkutaunitsaugajattuk asiKigajapata Labradorip imappingita ingeganinginnut akuniongituk siammagajattut illonagalanginnut killinginejunoluak nunaup. Ammalo asikKigijammijut Labradorip anginitsanginnut imappinut ammajunut, imaKalle nunamut tikiotigajalungikaluadlune, KaujimajoKagajangilak namut siammagajammangatik atautsikut. Sulleguk mannamunut appetsotauKattajut kiojautsiagonapalaingitut pitjutilioluat anuginik imappiolo ingeganinginnik tagganejuit Labradorip imappinginne. Nalonagalappaivullo sulle utsoaluit asikKitaujut Strait of Belle Isle-lime nunaliagajalammangatik nunalimmionut tikillutik.

(b) *Kanok attoigajakKa utsoaluk piviannaujunik sorlo timmianik, ogganik, poijinik, allonillo?*

TIMMIAT

Utsoaluk asiKKittauppat toKKogaigajattut, timmiat ivapvingit Kanitanganejut sorlo Kikittak, Gannet Island, aippanillo Herring Island, timmiat ivapvingit Kikittait nanetuinnajut, toKKogaigajattut unuttuvatsoanik timmianik. Ikinnisanilliguk timmianik toKogaigajattut ukiatsame opinganguti llu-

If oil is spilled near the edge of the Labrador Shelf, the Labrador Current will carry it southward at rates of 50 to 80 km/day (30 to 50 miles/day). Instabilities in the Labrador Current and cross-shelf circulation patterns in the saddle regions would move some of the oil onto the shelf where the average currents would carry it southward at a rate of 10 to 20 km/day (6 to 12 miles/day).

In the Strait of Belle Isle, currents flow in and out of the Gulf of St. Lawrence in response to tides, large scale weather conditions, and location within the Strait. Icebergs entering the Strait usually travel its length several times in different directions before going into the Gulf or onto the Newfoundland shelves. Oil is moved by winds as well as by the currents. Using the rule of thumb that oil will move at 3% of the wind speed, a wind of 20 metres per second (45 mph) will move oil 50 km/day (30 miles/day).

A simulation of oil spills from a number of proposed drilling sites on the Labrador Shelf suggests that oil released on the shelf will come ashore less than 20% of the time on average. Basically, the closer inshore the spill occurs, the more likely the shoreline is to be impacted. Oil spilled in the Labrador Current would be spread quickly over large areas, and while it is less likely to come ashore, it would be difficult to predict where significant patches might be at any one time. There are still questions that remain unanswered regarding winds and ocean currents in the north Labrador Sea. It is hard to imagine that oil spilled in the Strait of Belle Isle would not come ashore in the local region.

(b) *What effects would oil have on resources such as birds, fish, seals and whales?*

BIRDS

Oil spills near breeding colonies, such as the Gannet or Herring Islands, in early summer could result in large numbers of birds being killed. Lower numbers might be affected in the fall or spring when migratory birds such as turrs (murres), hounds (oldsquaw) and bullbirds (dovekies) are found along the coast.

Seabirds and seaducks are at risk to oiling because a large proportion of their time is spent on the water surface or in the water column. Flightless young, and the adults during moult, are especially vulnerable in late summer. A worst-case scenario could threaten populations of certain seabirds that concentrate in confined areas; for example, shore ducks (eiders), or that are low in overall abundance; for example, tinkers (razorbills).

gullo sorlo akpanik, A-nginik, akpaliatsunillo apKotigijangogunangitut ingegaligutik.

Timmiat mittelo sukkutaugajattut utsoalunniajoKalippat unutuillo imappimenginamata nunaillo killinginne ivapvingata sngane. TingiaKagonangitut piagait sulle piguaKajut sukkutaunnipaugajattut aujak najikasatillugo. Pionginippaugajattuk takkonatojallugit sukkutaulippata timmiat imak, toKKogattautillugit unuttuvatsuit timmiat iniKaluaKattajunik Kikkittane imappimeluattune (sorlo, aa-anget), ammalo, imak katingautiluajunik akpanik mitinillo. Piluattomik, timmiat mikKunginnik utsoalualuit sujuiKattajut timmialo nammatomik nigigonnalungitut nigomittunginagasuamut omagasuamullo. Utsoalummik eKKaigajammata mikKotagiasiligunik nutanik, unuttuillo toKKoganialilutik.

OGGAIT

Nalonangimagittugok utsoalummek asiKKijoKappat angijonek ogganik toKKogaijanninginnek, piloattomek ogganiavioKattatut. Kuleligailliguk sukkujaunginipaugajattut imappiop Kanganenginagamik. Utsoaluiguk 10 metersinik (30 feet) ititigijumut tikiKattalungitut taimaimat sukkuigajalungitut natannanik oggavanillo. Natannaiguk attutaugajalungimijut ikKammata impappiop. Oggaiguk attutaugajalungimimata, Kuleligait attutaunginipaugajattut. Sukkutaugajappatalo uvlone vogginillonet Katsinikkiak sukkutaugajattut.

ALLUIT POIJELLO

Alluit poijello attutaupnginitsauKattajut utsoalummut, timmiatitut pilunginamik. Timingit angijualummata, utsuKagamillo nigumitttisnatunik timinginnik sukkuitailitisiKattajut nigingikaluagutillo akunigalak Kanoegajalungitut. Poijelli sakKijannipauKattajut Marchimit Maymunut piagattaliaKiKattamata taipsomane sekune, taipsomanillo sekuit seKinimoaKattajut Labradorip imappingagut, Belle Isle-likudlotik White Bay-mullo Notre Dame Bayme. Tuave piagangit pigoKattavut, namminik neKitsasiogiamut. Natsivait, Kaigulello piagangit pigioKattajut ovlune sitamane 14-nanillo akongane. Illangit piagait utsoalummut toKogattauKattajut, mmatainnasimajut, sulle utsuKatsialunginamik, ammalo pigonasialugajanginamik niKitsasiogiamut.

(c) *Kanok tamanna attuigajattung inunnik pinasoaKattajunik ogganiaKattajunillo tagvane nunagijamine?*

TimmiasioKattajut, piluattomik mitinnik akpanillo, ukiatsame okiomillo pimmaginnipaujuk niKitsaminik pinasoaKattamata. Labradorimiut Inungit timmianiaKattamijut opingasangutillugo niKitsatagigasuamut ilaminik. Imalle, Taggamiot Labradorimejut timmianiaKattaju opingangolimmat.

Specifically, oil breaks down the waterproofing and insulating properties of the birds' feathers, and the birds cannot usually feed enough to keep warm and stay alive. In preening their feathers, birds could be killed by swallowing oil.

FISH

It is very unlikely that spilled oil would kill adult finfish on the major fishing banks. The possible exception is capelin which are found in the upper layers of the water. Oil within the water down to approximately 10 metres (30 feet) would not be expected to cause problems for groundfish such as cod or redfish. Similarly, flatfish would not be expected to encounter toxic conditions at the bottom. Although there appears to be little risk to most adult finfish, there is a low probability that tainting could occur. Again, capelin would be most susceptible. If tainting occurs, it would probably only last several days or weeks.

WHALES AND SEALS

In general, whales and adult seals tend to be less affected by oil contamination to their body surface than do birds and fish. Their large body size, blubber insulation and large energy reserves allow them to avoid areas of contamination, even if this reduces food intake for a considerable period. A critical time for exposure of seals, however, is March through May when pups are born on the pack ice as it moves southward along the Labrador Coast, through the Strait of Belle Isle and into White Bay and Notre Dame Bay. The growth rate of pups from birth to weaning is rapid, ranging from 4 to 14 days for hooded and harp seals respectively. Some deaths would result from exposure to oil immediately after birth before pups are completely self-sufficient from their fat reserves. They would be less susceptible when they begin predatory feeding.

(c) *What effects would this have on the people who hunt and fish in the area?*

Seabird hunting, particularly for seaducks and turrs, is a traditional fall and winter activity that provides fresh meat. Labrador Inuit also hunt migratory birds for food in the spring. However, with the exception of northern Labrador, few families are still dependent on these birds as a principal food source.

Oil spills could kill enough seabirds that hunters would notice a decrease and food supply shortages may result. Seabird numbers could be built up again by careful management.

Spilled oil reaching coastal areas along Labrador and within the Strait of Belle Isle could have some negative effects on

Taimaigaloativlugo, Taggamiot Labradorime issomagilonnagit, ikittut ilagengojut niKijaKatsainajut timmianek.

Utsoaluit asiKKitaummata nammatonek timmianek toKKogaigajattok, pinasoattet malogusuniatilluget ikillipasimanninginnek aippiojagiKattajanget. Timmiat ununninet aippiojangillo unutsiomigajammijut kamagijautsiatoappata omajuit. Utsoaluit asikKitaujut Labradorime Strait of Belle Isle-limillo sukkuigajammijut pinasuattinut imminik suliaKaKattajunut aippiojagijaunginnatuillo omajuit imappimiotait ukuninga sukkuiloagajattut, Kuleliganik, tungujuktanek uvilunik, ammomajunik, kavisilinik, iKalunik, ogatsunik poijinillo. Utsoaluit idjujonitsait silamut ingegatitaujut namutuinnak pitsatuluattunik illimaluattunillo aullajattisilattut pejaillutillo, pilukaigajattullo sorlo Kuleligait manninginnik, uvilunik omajunillo imappiop iKKanganejunik. Nutangunitsaujullo utsoaluit asikKitausimajut toKKonatogajattut. Omajuit sukkaitoaKolaudlutik poitjusungojut mikinitsaillo sorloalluit ogaujullo sorlo putjotet ikattomejut imappime sukkutaugajappalaijut ikilliomitaitauppaniavlutik.

Nunalimmiot attotaummagilattut ogganiaKattajut omajunniaKattajullo tamakkoninga omajonek oKautaujonek. SukkoijoKagajappat akunegajalungitut pilukappagajalungitullo immaKa atautsime senanillonet jarine taimaigajattuk. Omajuit toKKogattaungikaluappata, utsoalummut atotauppata omajuit sorlo allogalait putjotigalaillo, pijaugaloaligonek tipagijamitut tipaKagajalogonaitut. Tamanupat akoniolungetok taimailingagajattut, asiKKiniosimajok nuKKatiautoappat, silamullo utsoaluk ikollaumititauppat. Utsoalumut nipiaKatausimanninget pejagajattok ovlune Katsinikkiak ubvalo Katsinikkiak woggene.

AsikKisimajoKappat imappiop uvingajanginne ammajunioluak ilimagijauluappalaijut unuttuvatsuit.

Sunatuinnait omajuit aulammata nigijauKattajut asinginnut omajunut sorlo omajuit sunatuinnait piagangit, timmiat alluillo, ilanginne imappine nagvatauKattajut. Tamakkoninga omajuakKanik sukkutaunningit ilimagijauppalaingitut unuttumata Labradorip imappinginne. Omajuit piagangit oggaillo sunatuinnait suvangit imappiop asikKiviosimajuit Kanitanganejut ininganejulluasiallo sukkutauppalailattut; sorlo jarilet atautsimik oggait sunatuinnait toKKotaugajattut.
Tamannaugaluatillugo, piagait mannellonet assiogajagaluatillugit, unutsigiallanitsangit ogganiatiujunut kenaujaliogasuajunut imminik sukkuilaatut utakKilutik imaKa tallimane senanillonet jarine. Sorlolo agvamik angiloattumillo ogagait ikkatomejut itijomejullo ikillititaulogajangetut, unutsiomigajammata jaret tallimait Kanippata. Taipkoaguk kisimek omajuit akuniolungetok omaKattajut pinasoattauKattajut mikijudlotik sulle, (omaKattajut pingasone sitamanillonet jarine) sukkutaugajattut ikillititsiniavlutik pijaugasoajut. AttotauloammagijaKotulle kingupvait Kolleligaillo.

local commercial and subsistence food sources such as capelin, blue mussels, clams, salmon , char, rock cod, and ringed seals. Weathered crude oil would have lost most of the lighter, more toxic fractions, and impacts would be largely physical such as smothering of capelin eggs, mussels, and other animals living on the ocean floor. Fresher crude would pose the additional problem of direct poisoning. Planktonic and juvenile forms of various finfish and shellfish in the inshore area could be affected. Although local stocks could be reduced, it is unlikely that the spill would be large enough to significantly affect species at the population level.

Losses could affect the people who fish or hunt for these resources at a local level. Impacts would be of short term, although they could be of moderate duration (one to five years) depending on such factors as the severity of the spill, time of year, toxicity of the crude and life history of the animals. Even if animals are not killed, possible tainting of finfish and shellfish catches could make the catch unpalatable. This should not last long once the spill is stopped, and the oil is weathered. Tainting should cease within days to weeks.

Spills on the shelf break areas are of concern because of the high level of biological activity which is supported there. High concentrations of nutrients, plankton, larval fish, seabirds and whales are found at these sites. Impacts upon plankton populations would be minimal because of the large size of such populations within the general Labrador Sea area. Impacts on larval fish and fish eggs at or near the contaminated surface waters could be significant; for example, a large proportion of one year class of a fish species could be lost. Even if this were to occur, it is unlikely

Ammaninget Labradoriop Imappinginne, ilitagijaulittut 2,000 metersinik (6,000 feetinik) avataKaninganek, sukkutaullagilaKolungetut imaKa, asiKKitoKappat utsoalummek. Taimaimmaguk, asiKKitoKagajappat tamane, nunalimmionek attoilagilaKolungetut ogganiatiojonek.

(d) *Kanok attoigajakKa utsoaluk pitoKaujunik inuillo nunavinigiKattalauttanginneng?*

Labradoriop Newfalalo nunagijangit pitoKalet sitjanelluasiajut itiningit nunamut tungaviotsiamagijut, taimaidlutik utsoalummik asikKiviogajappat ulilippalo, ikangalippalo anugik, apKonalippat, sekuillo sattaukalippata nunannut, nunangit tungavingillo nunaujut pitoKajuit sukkutaugajattut, piguttuit, kanggasotiojut, saunivinello nutaungituillo sunatuinnait ujagangulittut KimigotauKattajut sujuttaulappalaijut ovlunginnik Kimigotaunningillo ajunialilutik.

Imappiop natinnajangettut pitoKautiolittut, tagganeloattut Strait of Belle Isliop, sujuktaulagigajattut asiKKiviogonek utsoalummut. Tapkoa imappinginne omiavinialuviniKajut asigosimaKattalauttonek, saunivininnek, katagasimajonek oggatalialovininek asinginnillo pitoKavininek.

(e) *SujuKagajakKa:*

- ikillitailigasuallugit asikKijun?
- salummasailigutik asikKitausimajunik utsoalunneng:
- imappime
- nunammut tikigajappata utsoaluin?

Sujuttailititsigasuamut atjatuttik asikKigajappat utsoalummik, Kanadame Coast Gardikungit ukuninga pingasunik mallegatsanik mallegiaKagajattut:

i) Sivollimik, utsoaluit pilukattausimajunit illugusinnit ubvalo illonanganit pujulummit pumppitaugajattut iliukKataullutik seKullusimangitunut illugusinnut pilukasimajumit pujulimmit, ubvalo asianut pujulimmut ilijaungallutik, tamaimallo pijoKappat salumaillititsitailigajattut imappimik.

ii) Utsoaluk asikKisimappat imappimut, illonanginnik tigollaigasuagajattut atullutik imappimejunik utsoalunnik Kallotialunnik Katuinnanganillo Kalotiallunnik, imak kamagillugit Kanok pimmangatik anugik, imappik sorlo ingiulippangipat, sekoKappangipat, takonnamilugit Kanok angitigijumik asikKisimanningit.

iii) Utsoaluk tikigajappat nunamut, salummasaigiaKagajattut inunningak suliaKattisillutik. Inuit suliaKattitaugajattut utsoaluk ikoallataunialilune ubvalo nunamut iliukKatauppat piuliukKatauniallune.

that this mortality of larvae would result in a significant loss of additions to the commercial fishery 5 to 10 years later, as other environmental factors could compensate. For instance, a loss of 50-70% of the larval year class of northern cod may not result in any reduction in inshore or offshore catches five years later when the cod are of commercial size. Only species with a short life span that are added to the fishery at an early age (3 to 4 years) would be affected in terms of reduced catch. The most vulnerable species in this regard seems to be shrimp and capelin.

The waters of the open Labrador Sea, defined as the area beyond the 2,000 metre (6,000 feet) contour, not particularly sensitive to oil spill effects. Therefore, incidents occurring here may have little impact on coastal residents or on offshore fishing interests.

(d) *What effects would the oil have on historical and archaeological sites?*

Many historical and archaeological sites in Newfoundland and Labrador are at, or very close to, the present sea level and would be at risk from spills, especially if the oil coming ashore coincided with high tides, onshore winds, storms or ice rafting. Artifacts, soils and structures within these sites could become contaminated and pollen, seed, bone and charcoal samples used for analysis and dating could be spoiled.

Underwater historic sites, specifically those located on the north shore of the Strait of Belle Isle, could be irreparably damaged by oil spills. These waters contain a large number of shipwrecks, bone and other refuse deposits, collapsed shore stations and other artifacts.

(e) *What would be done:*

- to minimize the spillage?
- to clean up the spilled oil:
- at sea
- if it reaches shore?

In order to minimize the effects of pollution from such a tanker, Canadian Coast Guard's procedure would follow three phases:

i) Initially, the oil from damaged portions of the tanker would be pumped into undamaged spare compartments. If necessary, oil could be pumped from the entire tanker into a receiving tanker. These measures could eliminate any further pollution.

ii) If oil had escaped from the tanker into the sea, attempts would be made to contain and recover the spilled oil

iv) Sulle mannamut KaujimajoKangilak imappisoame salummasaijoKasungollammangat ingiulivatsuatillugo sekoKatillugolo ubvalo sekuluviniKatillugo aulajune.

3. *SujoKagajakKa pujulik atjatuttialuk seKKolugajappat kiviniallune?*

Pujulik atjatuttialuk seKKolugajappat kiviniallune, tatallune utsoalummut, kappianammagigajattuk. Sivollipamik Pujulet kamajingit Kaujititaugajattut imappilo pilukaviojuk puttagutinut Kallotinut iliukKaviogajattuk. Kingollimik, ikkaninga nammagajappat, pujuliop atanut aijoKagajakKuk matuttugiattulugit illonainik killanginnik natanganejunik utsoalummik asikKitailigiallajoKagasuamut. Taimak natanganojoKagonangipat mikijunik akKajonik atujoKagajakKuk. Pingajuanne, atjatuttik pujulik utsoalummut tatasimappat, kenaujamillo angijualummik asiojijoKagajappat, isumatsasiojoKagajakKuk utsoalummik pumpisigiamik pujulimmit puttalittomit. Taimalle pigiaKagajangitut atjatuttituinaupat omianga. Kanadame Coast Gardiojut issomalutigijaugajammijok apKotigijaujume kivijoKagajappat pujulet asinginnutilimanattoKappat. Taimalle pijoKagajappat, peKojaliattigut Kinuagajokagaja Kuk AngajoKalaginganit Ingegautuligijiop imak agviamagigajappat pujulinut apKotioluappat pilukainiakKogajapatalonet. Taimallo pijoKagajappat KaujititsijoKagajagivuk Pujulet kamajinginnik tautsitaunialilutik nunangoat atuttauKattajut pujulinut, imak tautseKojaullutik sukkaninginnik sunaillo Kaujigatsaujut kamagijaummilutik.

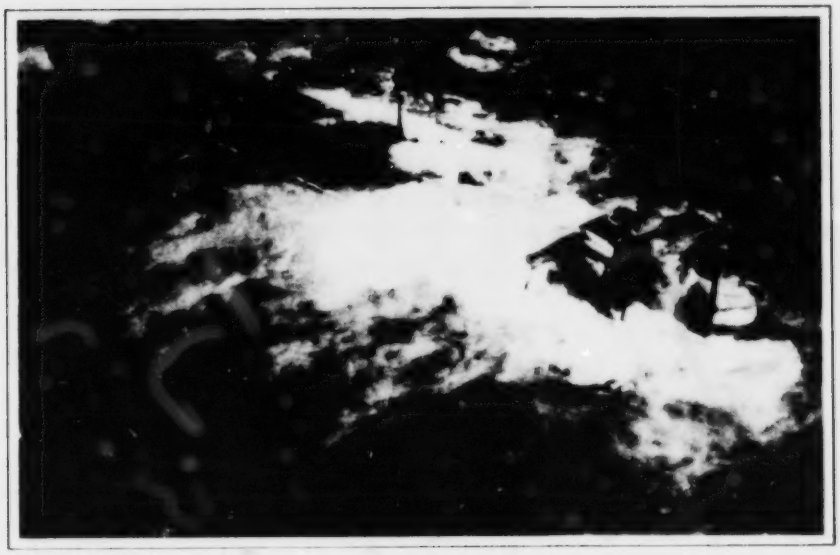
4. *Kanok KaujimattigijoKava imappiop ingeganingit aulattigimmangatik Labradoriop ImappiKotingane imak utsoalummik asikKitoKagajappat issomagijaunitsanganun?*

Takkonadlugit pilukajoKagajappat Kimigotausimajume, oKalatsiatut Kanok akulaittigimmangatik ingeganiojut tukisijaugalasimajullo Kanok aulatigisungommangatik ingeganiojut, Kanuitomangatilo sule KaujisautaugiaKajut. Tapkonangat KaujisattoKaKatillugo Kanok pijoKalakKomangat utsoalummik asikKitausimajok atjatuttaugonalattuk inigijaminit asianut initsagilattaminut pimmagigiaKaligunik. Labradoriolle Imappingane, imappiojup ingeganingit Kaujijausimajut angijualummik ingegaKasungonninganik - KimigotoKasimagivuk Kanok nillatattigimmangat Kanorlo siugaujaKatigimamangat; pujulet, peKalujait Kanok sukkatigisungommangatik aulaligamik; satalaittikut sekuit sattauKatanningit; ammalo unuttunik KimigotiKamidlutik Kanok sukkatigijomek umiannut aiviogajammangatik ingeganiojut. Tamakkoa Kimigotausimajut takkotitsijut ovlu tamat silak Kanok aulattigiKattamangat Labradorip Imappingane tamna pitsatunippaupalaimmat kitanioluattume itijunepaujune uvingajane, Labradorip ingeganingit tagvane nagvatauluaKattamata. Akunik Kimigotausimalimmata piKalujait aulanningit, imallo mannagulak KimigotoKasimalaummi-

using offshore booms and skimmers depending on wind, sea-state, ice conditions, and the quantity spilled.

iii) If oil had reached shore, the main clean-up method would be manual labour. People on the shore would recover oil manually and dispose of it by burning or possibly by storage on land.

iv) At present, there is no proven technique for clean-up of oil spilled in high seas with ice or in moving pack ice.



3. *What would be done if a tanker was damaged and sank?*

If a tanker was damaged and sank, presumably loaded with crude oil, a difficult situation would exist. Firstly, a Notice to Shipping would be issued and the area marked off with buoys.

Secondly, if the depth was not too great, a dive to the tanker would be made and all outlets in the hull plugged to prevent the escape of oil. If the depth prevented diving, mini-subs would be used.

Thirdly, presuming the tanker was full, consideration would be given to the pumping of oil from the submerged tanker. This option would not be considered for freighters or similar types of vessels.

Canadian Coast Guard would also be concerned with any danger the sunken vessel might pose to navigation. A recommendation for removal of the wreck would be forwarded to the Minister of Transport if the vessel made marine navigation more difficult or dangerous. In any case, a Notice to Mariners would be issued with subsequent changes to the appropriate nautical charts and publications.

mat tapkoninga utsoaluit suliagijaunninginne Labradorip Imappinginne, ovlu tamat piniannigijangit Kaujimajauluappalaijut assinginnit imappiojunit seKinganejune sorlo Neofalap Lawrentianniollo Imappeginne. KaujisattoKaKatillugo imappiop ingeganinganik, imallo asikKitoKagajappat utsoalummik, Labradoriop Imappisuanga taimatsainagalak pigajappalaijok asingititut imappiojutut. AsikKitoKagajappat utsoalummik aulanninga utsoalup aulataugajattut anugimmut imappiop ingeganinganulungituk.

Ilaiginille ingeganet sungojummata aulanningit, sorlo KikKasuane Labradorip ingeganingijangane, taimna ingeganiojuk taipsomane manna ingeganiojutut sukkatigilulangituk, taimatsainallo aulanniKalalungituk, KaujisattaugiaKalatutullo mallelugo utsoalup asikKitausimajuk, takonnataulonellonet ubvalo ilitsivigillugo puttagutinnik tuavittunik Kaujititsigonatunik. Kissianeguk satalaittisait silannik kamajutsanik pitagijausungolappalaijut kissiane 1990-tigalanne, imak KaujimajoKainnagasuamut avatait piniannigiKattajanginnik, silak atjigengitumik piusiKammat Kummoavallianingagut imak anugingita ingeganigijangitigullo KaujijoKagonalammat. Mannaliguk atuKattaniattut KaujisaKattalutik Kanok sukkatigijomik utsoaluit aulagonamangatik sivungane atuKattalauttaminik Kaujisautigijaminik atullutik. Akunionisalle KaujijauKattalauttutitut (senane ovlune ununnisanillonet) siago KaujimajauKattalauttut atuttaugonalattut. Nunalimmioluatsianille KaujisannioKattajut atjigengitunut nunannut pimmagionippapalaijut sulinnisauKattamata.

4. *How much is known about ocean current direction for the Labrador Sea in the case of an oil spill?*

In terms of risk assessment, a description of the average currents, and some understanding of the physical characteristics and variability of currents is required. From this information, an estimate of the likelihood that oil spilled at one point will be transported to another point in a certain period can be made.

For the Labrador Sea area, the ocean currents have been estimated from: large-scale surveys of temperature and salinity; ship, iceberg and ice drift velocities; satellite-tracked surface drifters; and several current meter moorings. These different data sources give a picture of the average clockwise circulation around the Labrador Sea. Circulation is strongest at the outer edge of the continental shelf where the Labrador Current is found. Because of long term interest in iceberg movements and because of recent studies associated with oil and gas exploration on the Labrador Shelf, the amount of data available for the Labrador Sea is relatively high compared to more southerly regions, such as Newfoundland and the Laurentian Channel.

In the event of an actual oil spill, the availability of ocean current information for the Labrador Sea is similar to that for other offshore areas. Over the short term, the movement of oil will largely be governed by the wind and the actual, rather than the average, ocean current. Except in regions of strong average currents, such as the core of the Labrador Current, the actual current at the time of an oil spill is likely to bear little resemblance to the average current in either speed or direction. Therefore, the current will have to be determined by tracking the oil spill either visually or by marking it with slick-tracking, drifting buoys.

All-weather satellite systems for the provision of nearly continuous coverage of environmental factors from which the surface wind and current speeds can be estimated should be available by the 1990s. Until then, short term predictions of oil slick movement will be based on previous slick movement history. Only for longer term predictions (10 days or longer) would historical average currents be of use. It is for local interpretations that local studies for a variety of different regions are most valuable.

E. KAUJITITSIKATTANNIK UTSOALUMMIK ASIKKITOKAPPAT

1. *Kanok angitigijomik utsoalummik asikKitoKagiaKagajakKa atautsimit atjatuttimit, pujuliop AngajoKanga KaujititsigiaKaniatillugo kamajillaginun?*

   Utoalunnek AsiKitailititsigiamut Mallegagijanget Kanadaup Pujuligijingeta Mallegatsanget oKajok, illonatik angajoKagijaujut pujulinut, oKagiaKavut tagvainak asiKKoitoKatoappat mikijogaluappat.

2. *Kinakkut KaujititauKattavan asiKKitoKamman, Kanorlo sukkatigijumik atuinnaugutjigiaKavan?*

   AsikKijoKatuappat utsoalummik anioKaijoKappalonet imappimut Kaujititsisagaigialet nalautikkut, nalautiKangepatalo, Kanokkiak tagvainak oKagiaKajut salumaillititsitailinniop kamajingita kivgatuttinganut ubvalo Pujuliligijet Inspectanganut. Ammalo, Kitane Kanadaup ApKotiligijingeta Mallegatsaliottingeta SuliaKavinganut, KaujititausagaigiaKagivut asiKKitoKappat imappime.

E. Reporting Oil Spills

1. *How much oil would have to be spilled from a tanker for the Captain to be required to report it to the authorities?*

   Under the Oil Pollution Prevention Regulations of the Canada Shipping Act, the masters of all vessels are required to report any oil spilled, regardless of the amount.

2. *Who receives these reports, and how quickly must they be prepared?*

   Discharges of oil or oily mixtures into the water must be reported by radio, or where a radio is not available, by the fastest means available, to a Pollution Prevention Officer or Steamship Inspector. In addition, the Eastern Canada Traffic Zone Regulations require that any pollution of waters be reported.

F. PILUKAJOKAGAJAPPAT PINIANNIGIJAUGAJATTUT

1. *Kanok pilukajoKagajappat pinianniKajutsaKava manna ubvalo Kanok pijoKagiaKalak-Ka?*

   Illonatik Arctikkimiot atjatuttet pujulet Labradorip Imappingitigujut Strait of Belle Isle-liollo Imappingitigujut, pitaKagiaKajut angiotausimajunik pilukajoKagajappat mallegatsaminik imappine toavittomik suliagijaugialinnik.

   Kanadame Coast Gardikut manna atuttaugiaKajonek pilukajoKagajappat Labradorip Imappingane piniannigijaujutsanik pingasunik, atautsimillo angeKatigegusiKalittut angiKatigegusiKalittut mane atuttaugatsamik. Illnangaguk atuttaugatsak una Kanadame Imappiojune Toavittomik Piniannigijaugialik oKalautiKajok Kanoksiak pijoKagiaKagajammangat kinakullo sunanik kamagiaKalammangatik pilukammagijoKappat.

   Neofunlame Kanok PijoKagiaKammangat kamajillaginget tukisititsisiavut Kanok pijoKagiaKalammangat Neofunlap avatingane pilukajoKagajammagippat.

   Atjatuttik pujulik peKutello atjatuttaujut pigijaupata kinakkunut sainnisajunnut angeKatigegusittigut taijaujukkut AngeKatigegusik Tamainnut Utsoalummik AsiKKijoKappat Ikajuttigejutsak (JOSREP) tagvainak upattogiaKagajattuk taimallo suliaKautiKaligunik salummasainnimik suliatsaKattisijuk/kavamakkullo aulatsiliaKigajattuk.

   Illonatik Piniannigijaujumik atuinnautitsigialet akKisuttaugegiaKasimavut sanajaugesimallutik taipsomunga kampaniojumut suliaKaviojumullo sorlo taijaujomut Kitanimiot AsikKiviogajappata Tagvainak UpattogiaKajut KatitsiKatigenninga (ESRA), tamna atuttaugonatuk kuapaujuk St. John'sime, Neofunlame asinginnilo nunalinnut kuapattagijaugonamijuk. Ammalo, utsoaluit kampaningit illonatik oKautjenaKattaniattut nammagijaungitunik KaujimattoKappat oKagonalutik kavamamionut, imak kavamakkut Kinuagijaujunik piniannitsanik akKisoisimatsiaKataugiaKamata, imallo suliatsagijaujune atingita suliagigialingit kamagigialingillo tukiKatsiagasuamut. Tamana kamagijaunginagiaKajok suliagijautsianginalunillo illonainik kamajunik Kanok pigiaKammangammik Kanorlo pijoKagiaKalammangat jarine Kaijone.

   Ammalo tapkoa Kanadamiot piniannitsanginne, AngeKatigegutisimajuk Kanadaup Kavamangatanik Denmarkimiollo imak tungasittisimat, Kanoksiak pigiaKagajammangatik utsoaluk asikKitaugajappat nalletuinnane nunaup killianejume Karaliop Kanadaullo.

F. Contingency Planning

1. *What kind of contingency plans exist or are required?*

   All Arctic tankers travelling through the Labrador Sea and Strait of Belle Isle are required to have an approved contingency plan in the event of a marine emergency.

   Canadian Coast Guard now has in effect three contingency plans and one agreement that apply to this area. The umbrella plan is the National Marine Emergency Plan which outlines the organizational structure and line of responsibility that would apply during a major incident. The Newfoundland Region Contingency Plan outlines the operational structure within the Newfoundland Region for dealing with an emergency situation.

   If a tanker or cargo was owned by one of the signatories to the Joint Oil Spill Response Plan (JOSREP), response procedures would be instituted in a joint industry-government operation.

   All contingency plans will be built onto existing individual company and industry countermeasures such as Eastcoast Spill Response Incorporated (ESRI), an equipment co-op located at St. John's, Newfoundland, and expanded where necessary. Furthermore, the oil companies will continue to interact with all appropriate government agencies to ensure compatibility with government contingency plans and to ensure that roles and responsibilities are well defined. This is an ongoing process which will allow all parties to be aware of one another's plans and future actions.

   In addition to the above Canadian plans, there is an Agreement between the Governments of Canada and Denmark which outlines the procedures to be followed if oil was spilled on either side of a line between Greenland and Canada.

2. *Is there adequate rapid response capability along the proposed routes in the event of a spill?*

   Coast Guard Emergencies-Newfoundland Region in St. John's holds the only inventory of tanker off-loading and inerting equipment in Canada. This equipment is designed so that it can be transported by Hercules aircraft and deployed to airstrips along the Labrador Coast. From the coast, depending on distance, the equipment could be transferred to a stricken tanker via helicopter or initially to a supply vessel or similar ship and then to the casualty by helicopter. The expertise is available in Newfoundland to operate the equipment and to properly rig it, however, limited numbers of trained personnel would constrain a continuous operation.

   In the event of a spill from a vessel travelling in the Labrador Sea, the time required to mount a response would be at least forty-eight hours from St. John's where the closest significant

2. *UpalunniatoKanialippat toavittomik suliaKagiasijoKagajakKa taipkotiguna Kinuagijausimajukkut apKotigijaugomalaatukun utsoalummik asikKitoKagajappan?*

Coast Gardikut UpalunniajoKalippat Kamajingit, Newfalamejut St. John'sime pitaKappalaijut Kanadamionillo illonainit KimigotiKajutoppalaijut imak Kimigoligamik utsoalunnik pujulinit usingejajoKalimmat. Taipkoa peKutingit akKisuttausimappalaijut tingijukkotitaugonagasuamut ajaunialilutik toaviotaugiaKagunik Labradorip nunanginnut. Nunaliojuit, Kaninginginga takkonadlugo pujulik pilukasimajuk. PeKotet ajaugajappalaijut pilukasimajumut pujulimmut halikaptakut tavungaujaullutik ubvalo sivollimik ajaullutik peKutiojut Kimigotet asianut pujulimmut omiammolonet halikaptakut. Ilisimamagittuit inuit Newfalameppalaijut kamagonatut aulatsisiagonatullo peKotinik ilitjisiatsiagonalutillo Kangatuinnak akKisoigiaKaligutik. Ilinniatitausimajut suliaKattisait suliaKatsainattitaugajattut upalunniajoKalippat ovlu tamallo kamagiaKallutik.

Utsoalummik asikKitoKagajappat pujulimmit Labradorip Imappingane, oKattoKaKatillugo utakKigiaKagajattut aiviogiamut St. John'simit maggone ovlune (ubvalo 48-tine situndine), taipkoa Kaninnipaummata peKotiKagamik utsoalummik asikKisimajumik kamautiKagiamik aijoKagianganillo ilisimajunik suliaKattisannik. Ammalo imak utakKigiallagiaKagajammijut situndigiallane 48-tine anginitsalummut pujulimmut aiviogiaKagunik ikajugiattosammik utsoalummik usingejagiattojutsamik pilukasimajommit pujulimmit.

Assiaguk upalunniagutiommijuk attuinnaupalaimmijuk St. John'sime, taimna taijauppalaijuk Kitanemionne Utsoalummik asikKitoKagajappat KamajioKataujut Kuapanga,(ESRI). Tamna kuapaujok atuttautuinnagiaKagaluadlune imappisuanne utsoalunniajune, peKotingit inungillo kamaKataugajammijut pilukajoKagajappat utsoalunniaKatigijangita ilanga pilukagajappat.

Angijualuguk pujulik pilukagajappat taggane, unuktunek inonnek ikajauktitagiaKalattut. Coast Gardikut ilinniatitsisimagaluatillugit nunalitoKaujunik Labradorimionik asinginilo Goose Bay-mionillo, ikajuvallipagajappalaigivuk imak Kanokkiak ilinniatitsijoKagajammipat ikkatume imappime salummaisaigiamik utsoalummik, taimnalo ilinniatitsinik sakKititaugajappat pimmagioluattune Labradorip nunalimmionginne.

3. *Kanok issomatsasiottoKasimava, Kanok pijoKagiaKalanninganik utsoalummik asik-KitoKappata nuname imappimillonen?*

Imak asikKitoKagajappat utsoalummik imappime takkonalutik silak Kanoelingammangat imappillo imappillo Kanok pimmangat, atugasuagajattut puttagutialunnik utsoalummik siamma-

stockpile of oil spill equipment and expertise is located. An additional delay of forty-eight hours could be expected if another large vessel was required to help off-load oil from the damaged tanker.

Another emergency oil spill response organization exists in St. John's in the form of Eastcoast Spill Response Incorporated (ESRI). Although this organization is mostly for the use of the offshore oil production industry, its equipment and experts could be used if the accident involved one of its member companies and would likely be specified in contingency plans.

If a large tanker accident occurred in the north, a considerable amount of manpower would be required. While the Coast Guard has trained some native people from Labrador and other people in the Goose Bay area, the need for an inshore clean-up course in the major communities on the Labrador Coast has been identified.

3. *What plans are there to respond to an oil spill on water or land?*

In responding to an oil spill on water, and depending on the weather and sea-state conditions, oil would be contained using floating booms and recovered using skimmers (floating devices used to scoop the oil from the surface of the water). Depending on its condition, some oil would be shipped for refining while contaminated oil would be burned or disposed of on land in dump sites approved by the Newfoundland Department of Environment and Lands.

Spilled oil that reaches the shoreline would be cleaned up in accordance with recommendations from Conservation and Protection of Environment Canada.

If an oil spill was to occur offshore, where the probabilities for affecting marine life may be very low, the most appropriate

giallatailititsisunik pejaigutialunnilo utsualummik imappiop Kanganit. Takkonamilugillo piojommangat piongitummangallonet utsoaluk, imak pioningit utsoalualuit tigollataugajattut utsoaluit salummasaivinganut ajaugajattut, salumaillisimajullo utsoaluk ikoallataugajattuk nunamullonet damppitaulutik damppinut angiotausimagunik kissiane Newfalamiot Avataligijinginnut.

AsikKisimajuit utsoaluit nunaup killianut aisimajut salummasattaugiaKalattut pigomausijangititut Pilukattailiniop SukkuitailijoKanniollo Kamajinginne Kanadaup Avataligijinginne.

Ilangane sorlo imappime itijumme asikKitoKagajappat, imallo sukkoijoKagajaKolungimat imappimiotannik omajunik, imak pititsigonalapalaijut utsoalummik siammatitsituinnalutik silamullo imminik nungutautillugo. KaujisajoKainalaKuk kamajoKatsiasainalunillo utsoaluit nane asiKitausimaKomangata, taimak pijoKagasoangimut.

4. *Pujulinik atuinnaujoKava utsoalummik asikKitoKagajappan?*

AtuinnaujoKapalaingilak manna pujulinik utsoalunik asikKitoKagajappat, tavatoalliguk nalletuinnanik Kanadaup Coast Gardikut pujulinginnik Kaujititaugajattut ikajuttaujoKagomapat asikKitoKasimapat utsoalummik. Kavamaiguk pujuligingitanginnik attatoKagajagivuk imak asikKisimajumik ikajugianiatillugo.

5. *AsikKitoKagajappat, Labradorime Nunalimmiongujut illonatik Kaujititaulattun?*

Nalletuinnait nunalimmiongujut Labradorime utsoalummut asikKiviosimagutik Kaujititaulappalaijut. Kinakkonut oKattoKajutsaumangat asiKitoKappat allasimajut attuinnaugiaKaniop piniannigijaujutsait mallegatsanginne.

approach may be to allow the oil to disperse and weather naturally. Monitoring and tracking of oil slicks will be conducted to ensure this is occurring.

4. *Are there any ships on stand-by for oil spills?*

   There are no ships specifically on stand-by for oil spills but any ship in the Canadian Coast Guard fleet can be called upon to provide assistance in responding to a spill. Non-government owned ships can also be rented for this purpose.

5. *If there is a spill, would all communities on the Labrador Coast be notified?*

   Any community on the Labrador Coast that could be affected by an oil spill will be notified. Specific avenues of notification are spelled out in contingency plans.

G. Sukkutautailinitsangit Avataligjet Mallegatsangit

1. *Kanok manna avataligijet sukkutautsilititsinitsangita mallegatsaKavan pitjulinnik atjatuttet pujulet aulanninginun Labradoriop Strait of Belle Isle-liollo Imappeginne?*

   Mallegatsakappalaivuk Kanadame Pujulet Atjatuttiojut Mallegatsangita mitsane tapkoalo avatannik sukkuitailigiaKapalaijut. Okoalo pimmagioluapalaijut:

   - Utsoalunnut SalumailititaujoKagajappat Mallegatsaujut
   - Kanadaup Kitanemiot Ingegautuligijet Naukkoligutik Mallegatsangit
   - Nunangolitoaumajuit nenittausimaningitalo Mallegatsangit
   - Ilimanattut Pilukaigajattut Pujulikkotauningita Mallegatsangit
   - Salumaittuit Siammatitauttailiningita Mallegatsangit
   - Pujulet Ingeganinime PeKotingit Atugatsangitalo Mallegatsangit
   - Kanadamiongungitut Pujulet NalunaikkotaKagiaKaningita MallegatsaKallutik
   - Salumaittuit Sunatuinnait KaujimajaugiaKaningita mallegatsangit
   - Pujulet KamatsainagiaKaningit Pangane Pujuliup Mallegatsangit

   Ogganiatuligijet Imappiligijet Avataligijello Kanadame illonatik angeKatigesimajut kamautikagiamik Ogganiatuligijet Mallegangane Numer 33-me, imak sukkutautailitisigiaKanniminik ogganik Kanoettutuinnanik, oggaillo inigiKattajanginne salumaittunit sunatuinnanit. Tamna mallegatsaujuk illonainut Kanadamiot imappiKotingane ammalo Kanadaup ImmapiKotigijangane 200 maillimik Kaningitigijume kamagijangane. Kanadame Omajuligijingita Kamajingit, ilaKasiutjidlutik Timmiat Mallegatsaliottinginnik, kamatsiagiaKammijut timmiat sukkutauttailinitsaniginnik salumaittunut.

   Imappine DamppijoKajutsaunginiop Mallegatsanga kamagijaujuk Avataligjet Kanadame, Mallegatsaliosimajut imappimut asiKigigajaningita salumaittunik Kanoettutuinnanik.

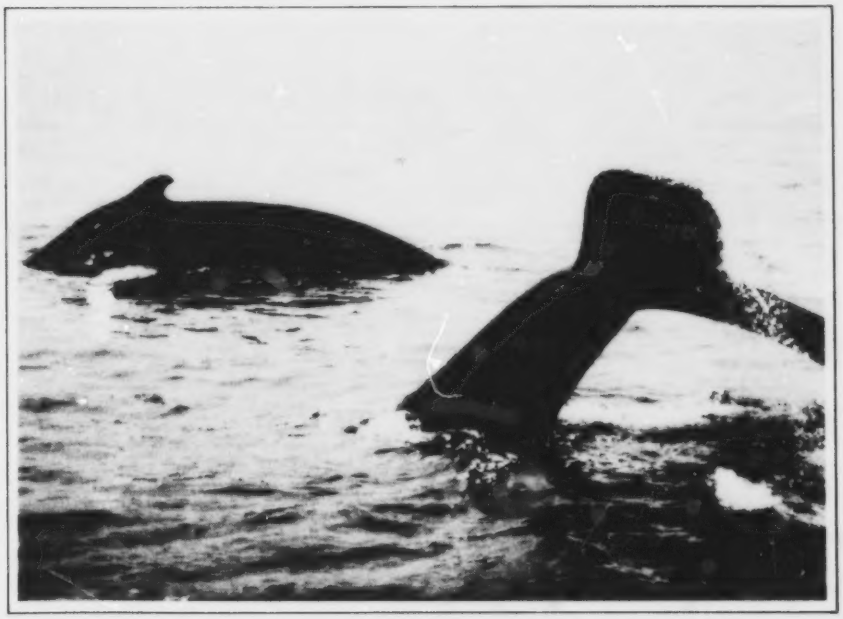
G. Environmental Protection Legislation

1. *What is the existing environmental protection legislation relating to tanker movements in the Labrador Sea and the Strait of Belle Isle?*

   There are a number of regulations under the Canada Shipping Act relating to environmental protection. The most significant are:

   - Oil Pollution Prevention Regulations.
   - Eastern Canada Traffic Zone Regulations.
   - Charts and Publications Regulations.
   - Dangerous Goods Shipping Regulations.
   - Garbage Pollution Prevention Regulations.
   - Navigating Appliances and Equipment Regulations.
   - Non-Canadian Ships Compliance Certificate Regulations.
   - Pollutant Substances Regulations.
   - Ships' Deck Watch Regulations.

   The Department of Fisheries and Oceans and Environment Canada have shared responsibility under Section 36 of the Fisheries Act to prevent damage to fish and fish habitat from pollutants. This applies throughout all Canadian waters and within Canada's economic zone which extends 321.8 km (200 miles) from the coastline. The Canadian Wildlife Service of Environment Canada is responsible for preventing the pollution of seabird habitat through the Migratory Bird Convention Act. The Canadian Environmental Protection Act, administered by Environment Canada, regulates ocean dumping.



2. *Mallegatsaujut 60-nik degreesinik latitude (nunangoame titigattausimajut) Labradoriop tagganganilloasiamejume Cape Chidleyme taimatsainak mallegatsauvan?*

Tapkoa mallegatsaujut aulanningit pujulet atjatuttiojut issomagidlugit tagganit seKinganut 60 degreesinit (nunangoame titigatsimajut) adjigijauluasiapalaingitut. Pujulet ingegajut Arctikkiop imapinginne kamagijautsiasiappalaijut imak malidlutik kissiane mallegatsanginnik Arctikkiop Salumaillitailititsiningita Sunatuinnanik.

Tagganejut 60 degreesinik nunangoane ilitagijaugutiojuk imak pujulet Kaujijaugasuamut Kanok ingegatigisungommangatik sekukuligutik, kamagijaullutillo nanemangatik Kangalo pujulet ingegalimmangatik Arctikkime.

SeKingane 60 degreeset tagganejume, mallegatsalet illonatik pujulet usijut tatadlutik Kaujitisigialet ingegaligunik namotuinnak okununga oKallutik Kitanimiot Kanadame Ingegautuligjinginnik Kamajinginnut (ECAREG KANADA).

Asingit mallegatsait atjigijaungitut mallejaugialet imak Arctikkimiot aulatsinimmine tigollaidlutik oKalajunik, KaujitisiKattagialet Coast Gardikkunik Kanoettokut sekukut ingegagonamangatik, Kanok angitigijomik utsoalummik usimangammik, ovlunganik oKallutik Kanga pitasiamlaummangatik alakasajammik Arctikkime Salumaillitailititsiniop Sunatuinnanik AllaKotinganik ovlu tammalo piniannigijaminik oKautjuilune, taimajoKagaluatillugo mannaujuk Labradorimionik ECAREG-ikut taimak mallegatsaKattisingitut.

2. *Are the regulations the same north and south of 60 degrees N latitude at the northern tip of Labrador (Cape Chidley)?*

   All the Steamship Inspection Regulations which apply to vessels in the Arctic apply equally to those south of 60 degrees N latitude with the exception of the Arctic Shipping Pollution Prevention Regulations.

   Strict control of vessels moving in Arctic waters is exercised through the Arctic Waters Pollution Prevention Act. North of 60 degrees N latitude, emphasis is placed on the capability of the vessel to navigate in ice and on the control of where and when a vessel may transit the Arctic.

   South of 60 degrees north, it is mandatory for all loaded tankers to report their movements in accordance with the Eastern Canada Traffic Zone Regulations (ECAREG).

   The Arctic (NORDREG) system which apply to the Arctic requires Coast Guard to be informed of the ice class of a ship, the amount of oil on board, and the date of issue of the Arctic Pollution Prevention Certificate. Vessels must also send daily reports. The Eastern Canada Traffic Zone Regulations (ECAREG), however, have no such requirements.

H. Atjatuttet Kanok Attoigajanninget Ingegaligonek

1. *Kanok attoilakKoKat, attoilagunik, mannaujume atuttauKattalitut atjatuttiojut pujulet ingeganingen avatagijaujuming, timmianing, ogganing, poijinik, allalunillo Labradoriop Strait of Belle Isle-liollo Imappinginejuneng?*

   Utsoalunnik sorlo kusiKattagamik iggavingit killaKammata ubvalo pejaituinnamata ingeganimmine, imak pujulet ingegaligamik Labradoriop imappingagut attuinginnaKattajut timmianik imappiop Kanganejunik ataguKatajunillo attoidlangijaiKattajut, pilloattomik appanik, appaliatsianik timmianillo ilanginnik. Unuttuvatsuiguk toKKoaKaKattajut jare tamat illonaine kitanejunik Kanadame, unuttuillo attutauKattajut toKKotaulugatik mikKungit utsoalummut mikijugaluammat attutaugamik. AppaniK mitinnilo pinasoattiojut oKautjiKattajut utsoalummut attutausimamata timmiat Labradorip Imappinginne, piloattumik Strait of Belle Isle-lime tavane atjatuttiojut apKotiKammata amittoagulaujumik. Tamana utsoalunniojok kamagennagianga pijagiaKKotujummagik Kaujitsigiangillo nallet asiKenamangatik. Asiagut toKKogaijoKagaluatillugo sorlo pinasoattinut, sukkuijoKaniakKuk nunaKajunik atjigengitune timmianut ikillivallianginaniattulo.

   Siagutsoanit, atjatuttinik pujulinik agvitapalaititauKattajogaluat agvitatituluadlutik aujautillugo ukiatsangutillugolo, ingegasiaKatalungitullo sekoKalimmat. Inuit issomaKasimalittut imak Labradoriop imappingitigut agvitalinningit unutsivalliadlutik, timmiat omajuillo apKotigiKattajangit piniannigiKattajangillo tamaunatsainaKattagonainingit piloattumik omajuit sorlo Kaigolet, Kilalugait aivello. Taimak atjatuttet pujulet agvitavallialinginit attuiKomangammik omajunik sulle Kaujimajaulungitut imallo sulle Kimigotausimalungimata. Tapkoa omajuit sakKijatsainaningit ununningillo, siagonit mannamonut tikidlutik pujuliKatsainagaluatillugo pinasuattaunginasainagaluadlutillo, takkotitsisiajok Kanok pinianniKasungomangatik Kanorlo apKotiKasungomangatik avatagijamine, imallo ekKanamagittovuk ununningit katingautigamik.

   Asinginnit atjatuttiojunut utseKattajut ingegadlutik nunalinnut unatattello suliaKavigijanginnut, illonatik apKotigijangit kissiane imappisoattigut ingegagiasungoppalaijut. Ilangane utsoalummik asikKitoKammat utsoalutuinnamik imak piluapplaiKattajut asianut utsevigigasuajaminut utseligamik ilanganillo nunamettumit utsoaluttalinit utseligamik asiKipalaiKattamijut.

2. *Manna Kanok pujulet atjatuttet attoiKogajakKat ingegakatajut Labradorip Strait of Belle Isle-liollo Imappingitiguligunik inungita piosigiKattajangining nunalimmiongujuning?*

   Ovlumimut sulle kKisoijoKasimangilak Kaujisautitsamik Kanok attoijoKagajammangat manna nunalimmiongujunik inosigijan-

H. The Effects of Existing Tanker Traffic

1. *What effects, if any, have existing levels of tanker traffic had on the environment or on the birds, fish, seals and whales of the Labrador Sea and the Strait of Belle Isle?*

   Oiling from shipping traffic off Labrador affects seabirds that spend a lot of time on or under the surface of the water, especially seabirds such as turrs (murres), bullbirds (dovekies), and their relatives. Many thousands are killed each year in all waters of eastern Canada, and many are affected, but not killed, by small amounts of oil on their feathers.

   Turr and duck hunters occasionally report oil on birds along the Labrador Coast, and particularly in the Strait of Belle Isle area where the shipping is concentrated into a narrow corridor. This oiling is difficult to control and its sources are difficult to track down. In combination with other sources of mortality, especially hunting, there could be significant impacts on local and regional population levels.

   Historically, tanker traffic has been restricted to the summer and fall periods and travel through ice has been minimal. There is some perception among local people that, along with increased shipping off the Labrador Coast, there have been changes in migration paths and in the behaviour of some marine mammal populations such as harp seals, beluga whales and walrus. The degree to which shipping activity may have impacted marine resources is, however, unknown because it has not been formally studied. The persistence of these mammal populations, in the face of past and present levels of shipping and hunting activity, indicates the ecological importance of the areas to the populations.

   Other than coastal re-supply tankers travelling to communities and military sites, all activity has been restricted to the offshore area. The periodic spills of fuel oil have generally resulted from transfer activities and spills from on-shore storage facilities.

2. *What effects, if any, have existing levels of tanker traffic in the Labrador Sea and the Strait of Belle Isle had on the traditional lifestyles of the local people?*

   To date, no organized effort has been made to evaluate the effects that existing levels of tanker traffic have had upon the activities and lifestyles of local people.

   While there have not been any major spills, there have been incidents that have raised concern, particularly among the Labrador Inuit on the north coast. The voyages of the "M.V. Polarstern", the grounding of the "M.V. Arctic Link" in Groswater Bay, the ice breaking trials of the "M.V. Arctic" in Lake Melville and the shipment of oil from Bent Horn in the Arctic are cases in point.

ginnik piosigijanginnilo atjatuttiojut pujulet agvitanninginne. Sulilo mnnumut utsoalummik angijualummik asiKijoKasimangimat, Inuit Labradorimiongujut taggamiot issomagijaminik oKasimalittogaluat IngeganitKattasimalittanga pujuliop Polarstern, Kakisimaninnga Arctic Linkiop Groswater Bay-me, sekusiotialuk uttuganninga sekukotlune M.V. Actikkiop Melville Tasingane, utsoalumillo atjatunnik Bent Hornnimit avangat Arctikkimit, sulle issomatsasiogutauppalaijut.

3. *Imk sekunik apKotigijauKattajunik omajunut inunullo atuluaKattajunik omajutsio-ligamik, imak pujulet sivolliolutik apKotigijauKattajukkgutik, Kanok attotaugajakKn, sukkutaugajakKan tamaging inuit omajuillo?*

Illonatik omajuit inuillo issomagidlugit, atjatuttet pujulet Labradoriop sekungitigut okiome apKotiKattailiKattaniattut. Tamannaguk tukiKagajalungimat taimak pijoKagasuappat kenaujaliojoKagasuatillugo sukkoituinnagajammata, taimaguk kissiane "illoaggajattut" sekukut kissiane pilukallagijoKagajappat. Sekuvatsuit Tagganejut Labradoriop kitanejut sttauKattajut pinasoavioKattajunut inunnut, taimallo ilangane jare tamat aijaKattalungitut. Sekuit sttauKaKattajut ilangane kangidlunut uiffanullo aglat tulagonatut ilugiKanut kangidlunut. Allat sekuit aijaKattajut nunammut tuladlutik atanialidlutik nunammut sinangunigattaunialidlone, taimnalo sink atuttausainatuk inunnut taimangasuannit. Tamanna Labrador Inuit KatitsiKatigennikunginnut oKautausimajuk allautaudlunillo imak Beaufortip Imappingita Avataligijet Kimigotingit katimattisiKataniammata tusagiadlutik inunnik issomagijanginnik. Sekunuguk tulagonalattut, aglat tulallutik sinamut kissiane apKotikkoligutik Hamiltoniop Imappingagut Belle Isle-liollo Imappingaguligutik allat Strait of Belle Isle-liluatsiap Imappingaguligutik. Mannaluatsiaguk, okiome atjatuttiojut pujulet tagvuna apKotiKaKattalungitut, KaujimattoKangilalo manna okiome apKotiKattoKalammangat piligutik Arctikkimit Strait of Belle Isle-limuligutik. Atjatuttet pujulet tavunagajagutik, ubvalo tilijausimalutik tavungajagutik, seKingagonialilutik Gulf of St. Lawrensikut, sekukut tulagajagutik issomalutaugiaKalungituk. Arctikkime mannagulakKimigotoKaKatillugo, ammaijoKasimammat pujulinut sinmeoluak, tagvainaguk sekuKattatuk ubvalo Koasagaigonadlutik.

Imlliguk taggamiot Labradorime pinasoattiojut Kanoegajalungitut, tavatoak Lake Melville-limiot Kaujititsisimalautut ammaigajappata pujulet sekumik apKotilionialutik pijagiakKotujutsiotitsigajaninginik. Ammaningaguk sekup Koattailigonasungommat unanninga silaup Kummoalimmat matuttailititsilidlune, taimaidlune Kanok pilammangat jare tamat KaujimajauKattalungituk.

Ijituinnamut takojaugonangitut Komakuluit kissiane sungojualunut Kingutialunut taijaujut Kallonatitut "algae", pigosagaittoa-

3. *What would be the impact of the creation of leads through the ice on marine life or on the traditional lifestyle of the local people?*

   In all likelihood, tankers will avoid the Labrador pack ice in winter. It does not make sense, economically, to "put into" the pack except in rare, emergency situations.

   Pack ice on the north Labrador Coast drifts into traditional areas used by hunters, although these patterns vary from year to year. The pack ice can move into bays and onto headlands and capes. It can also move up against and form part of the sina (Inuktitut for the edge of the landfast sea ice) which is an area of heavy traditional use. Evidence of this has been filed by the Labrador Inuit Association during the Beaufort Sea Environmental Assessment Review Panel (EARP) Hearings.

   Penetration well into the pack, and ultimately into land-fast ice, is only expected to occur in traversing the Hamilton Bank/ Belle Isle Bank and the Strait of Belle Isle itself. At present, there is no winter tanker traffic through these areas, and it is not certain if winter traffic from the Arctic would use the Strait of Belle Isle. If tankers chose, or were directed, to use a southern route into the Gulf of St. Lawrence, penetration into ice would not be a concern.

   Based on recent research conducted in the Arctic, leads opened in landfast ice quickly close or freeze over and do not pose a problem for local hunters. However, experience of northern Labrador hunters with ice breaking trials in Lake Melville indicated that leads can pose some difficulties. The time for the lead to close is related to air temperature and therefore varies throughout the ice season.

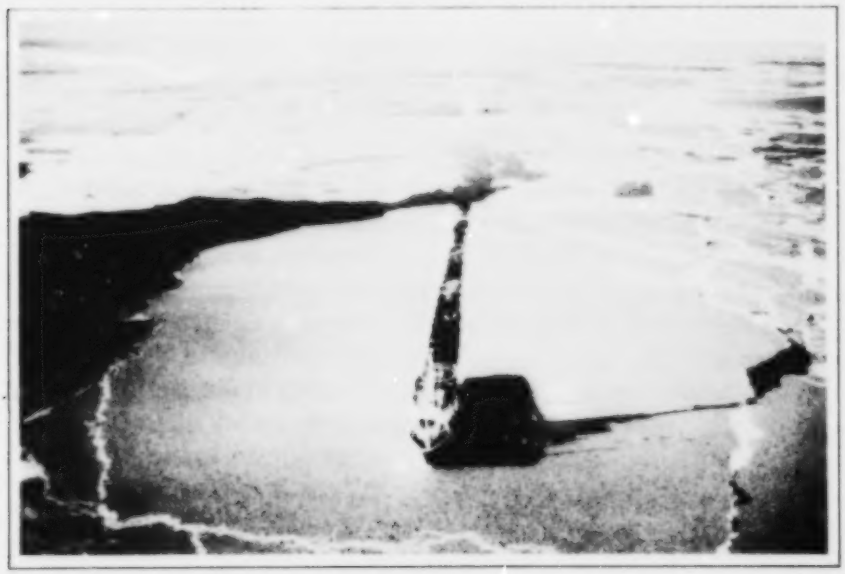
   Microscopic plants called algae may grow more quickly in water of leads, depending on the length of time that they stay

gulaiguk imappet ammanigijanginne, imak takkonamidlugit Kanok akuniotigijomik ammamangat ammaninga. Taimak pijoKagajappat taipkoa Komakuluit imappinginnetuinagajattut nigijauKattadlutid ogganut assinginullo omajunut imappimiotannut. Sekup ammatainnaningit timmianik sukkoigajalungitut. Naujaluit okiok nadlugo iniKaKattamata sekume sungiotisimajualuit ammatainnatausimajunik Koalittunillo sekunik. Jariolauttune Kngittune issomalutausimalauttuk ammatainnatausimajut sekuit llunut aiviodlangijaigajanninginnik ammanine ilujausimanialilutik anigtigonaniagonaidlutik. Mnamonuguk sulle tamana Kaujijausimalungituk Arctikkime taimak ammaijoKasimakKatillugo sekumik. Natsivait piagatttolimmata piagamminik sekume KimaiKattajut inulevigisimajanginne, taimaguk Kimainningit issomalutaupplaijut pujulinut atjatuttinut toKKotaugajammta Kjaulutik. Imalle, pujuliKatsiaKattalungimat ingegakatajunik, akulaittuagulammillo apKotiKaKattamata pujulet sekukut nanetuinnajut unuttuillo katingajut natsivait, sukkutaugajatsialungitut aglat issomagidlugit nunalimmiot poijinnianigiKattajangit.

open. However, the effects would be very localized and would actually provide food for fish and other marine life.

Leads in the ice would have little effect on seabirds. The Ice Partridge (Iceland gulls) that winter on the ice are accustomed to natural temporary leads that open and close periodically.

The concern expressed several years ago that leads would attract and trap whales does not appear to have been confirmed in recent Arctic experience. As ringed seals whelp in ice dens there is a potential for some seals to be crushed by tankers. However, given the low frequency of vessel trips, the small total area of the vessel track, and generally wide distribution and large population size of ringed seals, impact at even the local level should be insignificant.



4. *How much noise will these tankers make and how does this compare with the noise generated by current shipping in the Labrador Sea and the Strait of Belle Isle?*

   While it is difficult to state with absolute certainty, the underwater noise level created by large tankers would be between 130 and 180 decibels (dB) in a frequency range of 10 hertz (Hz) to 10 kilohertz (kHz). This noise level is close to that generated by other large vessels presently operating in the area and is also close to that generated by drill ships when they were active in the Labrador Sea.

5. *Will the presence or noise of the tankers have any effects on the environment, or on the birds, fish, seals and whales in the Labrador Sea and Strait of Belle Isle, and if so, what are they anticipated to be?*

   As the lower frequencies of the noise spectrum propagate from a source, a 180 decibel source level at 10 hertz may not reach "normal" noise levels for 370 km (230 miles). While concern

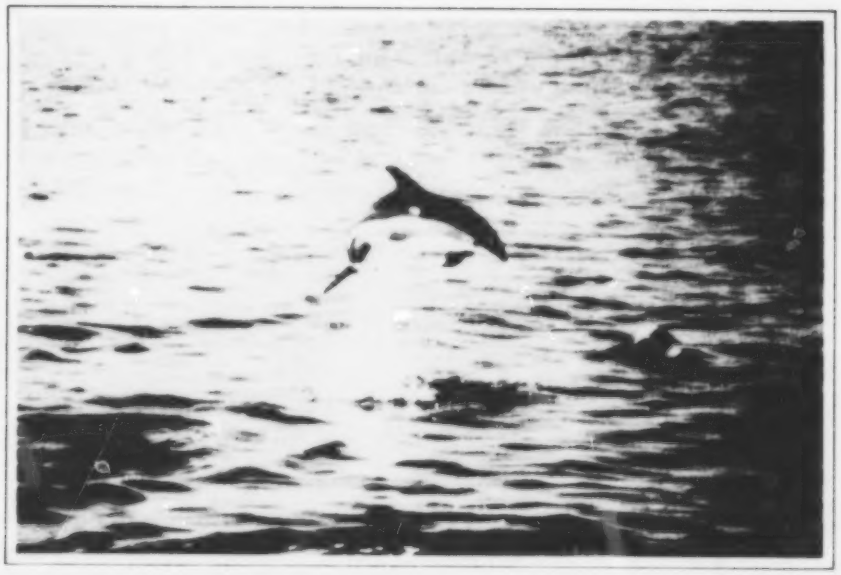
4. *Kanok ingegaligunik pujulet atjatuttiojut KikiggalijattigilakKan, Kanorlo Kikigangititut asingitut pujulet manna ingegaKattalittutitut Labradorip Strait of Belle Isle-liollo Imappingagut KikiKaKattigillikKn?*

   Manna tamanna oKautaugonasialungimat sulitsialune, imappiop atagut Kikigalijaligamik angujualuit atjatuttialuit pujulet KikigaKattigigajattut 130-tiop 180-tiollo akungane (taimna nipakittuagulauppalaik) ingegautingata tiktinga 10 hertzinik, tamnaguk nipakKotuginningata tusattaugonaingituk siutituinnamut. Tamananaguk nipakKotutiginnigigajattanga illonainut pujulinut manna atuttauKattalittunut, ammaluguk Kanittoligamik utsoalunniavinne Kalojualunne Labradoriop imappinginne taimatsainak nipakKototigiKattalaummijut.

5. *Tusattsauningit Kikigangit atjatuttet pujulet attoilakKa avatattinik, timmianik, ogganik, poijinik, llunginnillo Labradorip Imapingane Strait of Bell Isle-liollo imappinginejuneng, ulapitsilagunillo Kanok attoilakKa?*

   Kikigait pitsakinnisaujut siammaKalimmata pitsatutigijomit 180 decibellimit senanit hertzinit tikigajaluppalaingitut "tusattaugajattomut", Kikigalngit pitsatujojutsaungituk tikigajagune Kaningitigijomut 370 kilametrsinut (230 mails). Pitsakittogaluatillugo Kikiganga inuit issomalutiKasimajut ulapitsilanninginnik alluit nipliagutigasualippata alluit Kanitanganeligunik. Kitane Arctikkime, KaujijoKasimapallaivuk Kilalugait ulapitauvalaninginnik ivulualungata Kikiganganut sekup killianejunik, imak pujulik Kaningitigitillugo 10-ninit 22-nit mailsinit. Pujulik Kanillivalligame 15 kilametersinik (8 mailsinik), takotsausimalaummijut Kilalugait asiangusimanninginnik pinianningit, imak takutsaudlutik Kanok aulajutsaumangammik naloliomalidlutik namotuinalidlutillo naloliomatitaumut. Nalonalugonaimat unutsivallianingita atjatuttet pujulet sukkuigajanninginnik angijunik omajunik sorlo poijinik llunillo apKotigiKattanialittanginne Labradorip Imappingitigut, imak sulle KaujimajoKalungikaluatillugo Kanok sukkuitigilakKomangammik attoitigilakKomangatillonet sulle mannamunut. Tamana apKotigijaujok, Strait of Belle Isle-lilo, ekKanamagitojuk apKotigijauKattamimannik niKitsasiovigijaugiamik atjigengitunut allualunnut sorlo aavinut pamiuligannulo. Taimna apKotigijaujok niKitsasiovioKattamijok poijinut Kaigulinut natsivannulo, ammalo Strait of Belle Isle-liop imappingane piagattavioKattamijuk apKotigijauKattamidlunillo tapkonunga.

   Illonagalatik timmiat pujulinut, avioligamik KanoeKattalungitut kingungane piosigenajamitut piosiKanialidllutik. Unuttut timmiat sorlo naujluit malleKattajut pujulinik imk mallegatsaKagaluatillugo imappimut asikKijoKagiaKanginimmik, amiakkuvininik taimak mallenguangimagidlutik.
   SukkutaugajakKolungituguk timmiat ivulunginnut pujuliup. Imlle, KaujimajoKagaluakKuk KaujimalluasiajoKangininganik



has been expressed that low frequency noise may interfere with the communication of whales within the zone of influence, there is no evidence of effects on marine mammals from noise at such distances.

In the eastern Arctic, research has shown reactions of beluga whales at the ice edge to an approaching ship at distances of 34 to 40 km (18 to 22 miles). As the vessel came within a range of 15 km (8 miles) a further behavioral change was noted, characterized by confused movements and frequent directional changes.

The presence of increased tanker traffic could have an effect on large mammals such as seals and whales throughout the entire corridor of the Labrador Sea, although the nature or extent of any effect are unknown at this time. The area, including the Strait of Belle Isle, is an important feeding ground for several species of Blue, Fin, Humpback and Minke whales. This is also a major breeding area for harp and hooded seals, and several breeding and migration routes converge in the Strait of Belle Isle.

Most birds move out of the way when ships approach and then resume their normal activities. Many seabirds, such as gulls, often follow ships although regulations to control the dumping of garbage from tankers will reduce this effect to some degree. It is not expected that noise will affect seabirds to any great extent.

It is generally recognized that there is a lack of knowledge currently available on the effects of noise on birds, fish, seals and whales. As a consequence of the issue surfacing during the Environmental Impact Assessments for the Arctic Pilot Project and Beaufort Sea, the need to undertake some basic research on the subject has been clearly identified.

imk sukkutaukKogajanninginnik timmiat, oggait, poijet lluillo ivilunginnut. Tamana sule Kimigotaummat Kaujijauvallialimmalo tusagiaKattaningita Avataligjet Sukkutautailiniop mitsanut Kimigotiojut Arctikkime Sulliagijaullagilattomik Beaufort Seamillo, tukisijoKatsiasimaliKuk KimigotoKagiaKalninganik tamatsoma mitsanut.

6. *Imk suliaKattoKalakKa KimigojutsainaKagasuamut atjatuttet pujulet ivulungit attoiKommangammik avatattinik, timmianik, ogganik, poijinik, allunginillo Labra-dorimion Strait of Belle Islelimiollo, KimigotoKamilonillo attutaukKomangatik nunali-miot inosigijangit piosigijangillo issomagillugen?*

Sulliguk KaujimajoKatsialungimat ivulungit pujulet attoilakKomangammik timmiat, oggait, poijet allalunillo nalonagalavuk sulilo tukisijautsiasimalungimata KaujisattoKasimagaluadlune Kaujijausimalungimata oKautaugonasiangituk, imalle Kimigosiagasuajogaluat mannamonut. Kanadame Oganniatuligjet Imappiligijello (DFO), Inummagiligijet Taggamionik KatitsiKatigennikungit utsoalunniatiojuillo KimigotiKapalaijut avatanik Kanok attoiKomangatik ivulualuit. Manamonulle, kamagijaullagigasuappalaijut omajuit piosigiKattajangit aullannigiKattajangillo ivulunut attutaukKomangatik nunalimmiot taimak KimigotiKakKojimmata. KimigotoKalagivuguk atuttausainatut inunnut omajuit Kanok attutaukKogajammimangatik, tamannaguk suliagijauvalliapaiaijok.

6. *Will there be a monitoring program to determine if the noise from the tankers has any effects on the environment, or on the birds, fish, seals or whales of the Labrador Sea and Strait of Belle Isle, or on the traditional lifestyle of the local people?*

   Because of the uncertainty about the impact of noise on birds, fish, seals and whales and the gaps in our understanding of the issue, monitoring of distributions and migrations is logical. The Department of Fisheries and Oceans (DFO), the Department of Indian Affairs and Northern Development (DIAND) and the oil industry are carrying out research on the effects of noise on the environment. At this point, emphasis is being placed on basic research into behavioral and physiological responses of potentially affected species of local concern.

   Monitoring for effects upon traditional harvests of potentially affected species should, however, be carried out.

I. Pujulinut Ikajuttauniokattalattok

1. *Mannaujome pujulet ikajuttioKattajut kamavat, sekunik Kanok pimmangmmik KaujititsiKattadlutik, ikajugiaKataugiaKagajattunik piulidligasuagiaKaligunik sorlo kivilittomik pujulimmik, illonatik tapkoa atuinnauvan, utsoalummik asiKitoKagajappat tagvainak aijoKagajakka, nmmavallo oKalaKatigeKataujutsauningit kamatsiagasuamut pigiasijaugajappata Kinuagijaujut atjatuttisait pujulet apKotitsanginne?*

SEKUIT

Kanadame Coast Gardikut kamajiKajut suliaKavimine St. John'sime (taijaujuk Sekuk St. John's) KaujititsiKattagasuamut Coast Gardikunik sekuit pitjutigidlugit, Newfalame, imak KaujititsiKattajut sekukojoKalimmat ingegajunik pujulinik, imappingane Labradorime Strait of Belle Isle-liollo kamautiKappalaimijut. Coast Gardikut amma aulatsimijut ingegaKattajunik Atlantikionigtangane issomagidlugit, imak kamagidlugit suliaKattitaujut sekosiotialuit pujulet. Taimnalo suliaKaviojuk tungavioKattajuk oKlaKatiKagiamik KaujititsiKattagiamillo sekuit pitjutigidlugit, imallo oKautjiKattamijut sorlo naukkjoKajutsaumangat pujulet atjatiojut imappikjullo issomagimmidlugit.

Taijak Sekuk St. John's, Newfalakkujutigut tungavioKajok Kaujisattiomata Kanok sorlo sekoKattigimmangat omiattutiojunik. Kaujititsigiak sekunik ekKanamagivuk imak Kanok sukkatigijomik ingegajutsaumangatik sekukuligunik oKautjoiKatagamik Kanorlo sekuit sukkatigijomik aulammangatik, nankKmangatillo sekuit, sekukoniakKomangatik imappikligutik ikajuttaugonagasuamullo sekosiotialunut sekukuligunik ikajuttaujoKagomapat.

Ammalo, Ikajuttigedlutik SuliaKavilet/Coast Gardikullo Mallegatsaliotiingit, tapkoa ilengappalaimmijut pujulinut tatajunut utsoalunnut atjatuttinut, atjatuttiojunullo sunatuinnanik ilimanattunik, Coast Gardikut kamagiaKappalaijut oKagiamik nallet imappet sekuKaluadlamangatik ilimagijaugamik ingegaviogiamut. Tamana tilitliKattanik tapkoninga kamatsainagiaKammata illonainik ingegajunik mallegatsaujunillo mallemangatik kamamidlutik. OkpijoKavuk manna atuttauKattajuk sekunik kamautiKannik piojunninganik ikajutsiagonamata jarine Kaijone pujulinik, sorlo Kinuagijaujomik atjatuttinik pujulinik Arctikkimit piKattajutsanik.

I. Marine Services

1. *Are existing marine services such as ice forecasting, search and rescue, oil spill response, and marine communications adequate for the proposed tanker traffic?*

ICE

Canadian Coast Guard maintains an ice operations office in St. John's (Ice St. John's) to provide Coast Guard-Newfoundland Region with a means of monitoring all ice-related shipping activities within the Region's area of responsibility including the Labrador Sea and Strait of Belle Isle. Coast Guard also manages the operation and utilization of regionally assigned ice breakers and provides a central point for receiving and sending all ice reports and advisory messages to shipping and marine-related industry.

Ice St. John's, being the Region's focal point of ice information, is able to analyze such information and provide mariners with an ice information service which includes: a nautical interpretation of present and expected ice conditions, ice routing, and ice breaker assistance if necessary.

Also, under the Joint Industry-Coast Guard Guidelines which apply to laden oil tankers and carriers of bulk chemicals, the Coast Guard is responsible for declaring an area as an active ice control zone. Such a declaration sets in motion a monitoring system of all such traffic to ensure guidelines are followed.

It is believed that the existing ice service will be adequate to support future shipping, such as the proposed tanker traffic from the Arctic.

SEARCH AND RESCUE

Existing marine Search and Rescue services are considered adequate for the proposed tanker traffic associated with the shipping of oil and gas through the Labrador Sea and the Strait of Belle Isle. Two primary Search and Rescue vessels, the "CCGS Jackman" and the "CCGS Grenfell", patrol the areas off Newfoundland between Cape Bauld and Cape Ray, and Cape Bauld and Cape Freels respectively. These ships could, if necessary, be assigned to northern patrol routes during the passage of tankers. Support for these vessels during the ice season is available from the Newfoundland-based ice breakers "CCGS Sir John Franklin" and "CCGS Sir Humphrey Gilbert". Subject to operational demands, one of these secondary ships could provide Search and Rescue coverage during the ice season.

The Department of National Defence Labrador helicopters from the 103 Rescue Unit, Gander, and from the 413 Squadron, Summerside, with top cover support from the latter, could be deployed using St. Anthony or Goose Bay as refuelling points.

IKAJUGIATTISAIT PILUKAJOKAGAJAPPAT

Manna ikajuttisaujut pujulinik pilukajoKagajappat nammagijauppalaijut Kinugautaujumut pujulet atjatuKattanitsanginnut utsoalunnik Labradoriop Strait of Belle Isle-liollo Imappingagoligunik. Maggok ikajuttiogiasitainasimajok pujulek, CCGS Jackman, CCGS Grenfellilo kamaKattapalaijuk Newfalame akungane Cape Bauld-iop Cape Ray-lo, kamaKattamidlutillo Cape Bauld-iop Cape Freelsimillo.

Tapkoa pujulek, pigiaKagunik, avungaKojaugajagunik kamagiattulutik naukkomangata asingit pujulet taimk pisngupalaijut. Tpkoa pujuliop ikajoKatigiKattajgik sekusimatillugo Newfalamejunik sekonik seKolloijialuk maggok "CCGS Sir John Franklin", aipplo "CCGS Sir Humphrey Gilbert". Tapkoa sekosiotialuk peKKojaugunik KinijakKojaugajammijuk piolitsiKataulutillo lutillo sekosimatillugo pilukajoKagajappat.

Kanadame Unatattiojut Kamajionmijut Labradorime halikaptangit kamagijaudlutik taijaujunut 103 Rescue Unit, Ganderime, 413-lo Squadron, Summersidemiot, imak atuttaupalaigonamijut pilukajoKagajappat pimmagittomik siammatitausimagajattut, St. Anthony-me Goose Bay-millonet utseviKallutik. Taimak siammangatitsigiak aKKisuttaugajappat kamagijaugiaKagajattut Kanadame Untattuligijet AngajoKanginnut.

UTSOALUMMIK ASIKKITOKAGAJAPPAT KIOJASAGAINNIGI JAUGAJANNINGA

Coast Gardikuguk nammasiotiKajut imak manna ikajosigigajattaminik tagvainak pilukajoKagajappat upattosagainnigilattaminik. Tavatoalliguk angijualummik utsoalummik asikKitoKagajappat imappime nunalimmionut Kanittojumut, ilisimajunik utsoalunik asikKitsimajunik suliaKagonatunik pitaKatsiangilak, ammalo silak Kanoelingalamangat KaujimajauKattalungimat nalonagajagivuk imappillo Kanok pilamangat KaujimajauKattalungimimat pijagiakKotujutsiotitsigajattuk.

PUJULI.'NUT OKALAUTIGIJANGET

Illonainek pitaKalittut oKlautinek (MF) manna atuttauKattajukkut, oKalautikkut (foninik atudlutik) nalautikkut fonikullo oKalaKattanik manna illonaine atuttausainalittut Labradorip Imappingagut Strait of Belle Isle-limillo. Tapkoa oKalaKatigenniojut kamagijauKattajut Coast Gardikut NalautiKavinganut St. Anthony-me Goose Bay-me Hopedelime Cartwrightimillo.

'Itsatujualunnik tusagutiKajut (VHF) oKalavigiKattajamigut ..anittomit oKalaKatigedlutik) Strait of Belle Isle-lime ammalo 95 kilametersine (50 nautical mailsine) tikigonadlune tusttaunisait Cartwrightimut Labradorime. Pijagettaupat Kaningitomut oKalautiKavisangata napajoKavisanga Fox Harbourimejok 1988-89name, taimak Kaningitomut oKalatsainasungolalittut tikigonalutik tagganut 54.30 degreesinut (Oivanganut Smokey-mut) tikillutik.

Any such deployment plan would be the responsibility of the Department of National Defence.

OIL SPILL RESPONSE

From Coast Guard's viewpoint, existing marine services are generally adequate. However, in the event of a major oil spill in a remote area the availability of trained personnel, difficulties with access, and expected weather and sea conditions could pose problems.

MARINE COMMUNICATIONS

Complete Medium Frequency (MF), radiotelegraph and radiotelephone long distance communications coverage already exist throughout the Labrador Sea and Strait of Belle Isle areas. The communication system is provided by the Coast Guard Radio Stations at St. Anthony, Goose Bay with remotely controlled sites at Hopedale and Cartwright.

Very high frequency (VHF) communications (short range communications) coverage already exists in the Strait of Belle Isle area and within a 95 km (50 nautical miles) radius of Cartwright, Labrador. With the completion of the VHF site at Fox Harbour in 1988-89, continuous VHF communications will be available as far north as 54.30 degrees North (Cape Smokey).

Full communication services for message handling, radiotelephone calls, weather, ice and NOTSHIP broadcasts, and Search and Rescue services are available year round.

Illonainik oKalaviogonajutsanik misitjinik tigollaigonalattut nalautikkut fonikugonajunik pitjutiKavlutik silamik, sekonek, Pujulello nalautiKavinginnek, Piulinniatinillo taijanek Search & Rescue-nik, jare navlugo oKalaviogonalittut.

2. *Illonatik light-houset sulle suliaKavionginaniakKat inommun?*

   KimigojoKaKatillugo, Kanadame Coast Gardikut, Newfalamejut kKisoisimapalaijut alladlutik 26-et light housilet nunannik imallo immaKa inungit sulialet light-housine suliaKalagonaitut. Coast Gardikut sulle atulappalaijut nunalimmiomik katitsiKatigennimik Kimigojutsamik illonainik 56-inik light housinnik illonane Newfalame. Imk Kaujitsiagasuamut nallet light-housine inuit sulialet pjaugiaKalmmangmmik.

3. *Light-houset Koatsnattokungak aulataulligutik tamanna piojolattung?*

   Light-housiKaviojut Koatsnattuktitaulappata peKotiKalappalaijut pitsatujualunik nutnik manna sanajauKattalittunut.

4. *Kanok sukkatigillutik Search and Rescue-kut pujulimmut kivillitumut aigajakKan?*

   OKlammata Silatsoamiot Omiattuligijiojut KatitsiKatigeninga (IMO) Silatsoamiollo Tingijot KatitsiKatigekkungillo (ICAO) angeKatigesimajok Tapkoa Search and Rescue-kut (Kinijattet Ikajuttello PilukjoKammat) Kanadamionik kamaKattajut imappinillo akianejunik kamamidlutik, Ikajuttiojut Piolidlitiojut Kamajingita SuliaKavinga Halifaximejuk. Taiokoalo kamaKattajok illonainik Pujulinek Piolinniatiojunek SuliaKavinga (MRSC) aulanninginnik Kanadaup Atlantikkingane. Ammalo, Imappine Kinijattet suliaKavigigiallaumijok (MRSC), St. Johns'imejok, Newfunlame, tapkoa kamattitaupalaijut aulatsigiamik kamallutillo Kinijattiojunik Labradorip Imappingane Strait of Belle Isle-limillo sujoKagajappat, amma kamammijut assinginne Newfunlap imappinginejunik.

   Tapkoa Kinijattet Ikajutello, suliaKatsainatut ovlu tamat situndet nadlugit jare nadlugo. Taimna suliaKavik suliaKattilik ilinniatitausimajunik ilisimajupanillo aulatsijinik. Taipkoa suliaKattiojut. Kaujituagamik ikajuttaujoKagagiaKanninganik illonainik ikajuttaugomajunik tingujunut halikaptanut pujulinullo, KaujititsiKattamijut PiolidligiattuKattajunik Kamajingita SuliaKavinganik (RCC) Halifaximejomik, illonainik Imappine Kinijattet SuliaKavinginnik (MRSC) Kinijattinillo Ikajutiojunik (SAR), aulatsiKataujunik sujoKalippat.

   Maggok kamaKattajk Kinnijattet PiulidliKattajullo pujulek "CCGS Jackman", aippalo "CCGS Grenfell", kamaKattajok Newfalap avatanginne Kinijattet Piulidligasuajullo kamagigiaKammait. Aigajattuguk tapkoa pujulek ikajuttaugomajunut

2. *Will all present lightstations remain manned?*

As a result of a study, Canadian Coast Guard-Newfoundland Region has prepared a list of twenty-six (26) sites which may experience lightstation de-staffing. Coast Guard will continue to use the services of a local consulting firm to study all fifty-six (56) lightstations in the Newfoundland Region to finalize the locations of lightstations to be de-staffed.

3. *If lightstations are automated, will this be a good system?*

Lightstations which do become automated will be equipped to the highest of standards using state-of-the-art technology.

4. *How fast can Search and Rescue get to the scene of a sinking ship?*

In accordance with the International Marine Organization (IMO) and International Civil Aviation Organization (ICAO) agreements to provide Search and Rescue services in Canada and adjacent ocean areas, the Rescue Co-ordination Centre, located in Halifax, is responsible for overall Search and Rescue co-ordination in Atlantic Canada. In turn, the Marine Rescue Sub-Centre (MRSC) located in St. John's, Newfoundland has been delegated responsibility for co-ordination and control of marine Search and Rescue incidents in the Labrador Sea, in the Labrador Sea, in the Strait of Belle Isle and in other sectors of the Newfoundland Region.

The MRSC is operational 24 hours a day throughout the year. The centre is staffed with trained and certified Search and Rescue Controllers. The Controllers ensure that a co-ordinated response is effected on Search and Rescue incidents which require the tasking and deployment of both air and marine resources and, at the same time, the Rescue Co-ordination Centre (RCC) at Halifax is kept fully informed of all MRSC Search and Rescue controlled activities.

There are two primary Search and Rescue vessels, the "CCGS Jackman" and "CCGS Grenfell", which patrol the Newfoundland area of Search and Rescue responsibility. These vessels are on a 30-minute notice of readiness to proceed to the assistance of any vessel in distress. However, if considered necessary, one of these vessels could be assigned northern patrol routes during the passage of tankers. Also, the Department of National Defence helicopters based at Gander are also available for deployment when required.

Furthermore, the MRSC has authority to task any government vessel as a secondary resource; for example the St. John's- based ice breakers, "CCGS Sir John Franklin" and "CCGS Sir Humphrey Gilbert", and other Coast Guard ice breakers which transit the Strait of Belle Isle and the Labrador Sea in support of the eastern Arctic sea-lift operations. In addition, under the Canada Shipping Act, the Controllers have the power to order

pilukasimajoKappat situndiop agvangane (30 minutes).

PigiaKagunik, atautsik pujulik pekKcjaugune taggamionut apKotigijaujune atjatuttinut pujulijut kamagiaKagajappalaijuk. Kanadame Unatattuligijet halikaptangit Ganderimejut amma namut aikKojaugunik tilijaugunik aigiaKagajammijut.

Ammalo, MRSC-kut peKKojigunik atugiallagonatut nalletuinnanik kavamait pujulinginnik ikajutigigiallalugit. Maggok sekosiotialuk St. John'simejok "CCGS Sir John Franklin" aippalo "CCGS Sir Humphrey Gilbert", atuttaugonatok asingillo pujulet sekosiatialuit Coast Gardikut pigijangit atuttaugonamijut apKotiKaKattajut Labradoriop Strait of Belle Isle-liollo Imappingagokattajut ikajudlutik kitanemiongujut Arctikkime pujulet atjatuttingit peKotinik ikajuttiopalaimimata. Kanadame Pujulet Atjatuttiojut Mallegatsangita mallelugit Aulatsijiojut tilidligonamijut Kanoettotuinnanik pujulinik pilukasimajoKatillugo.

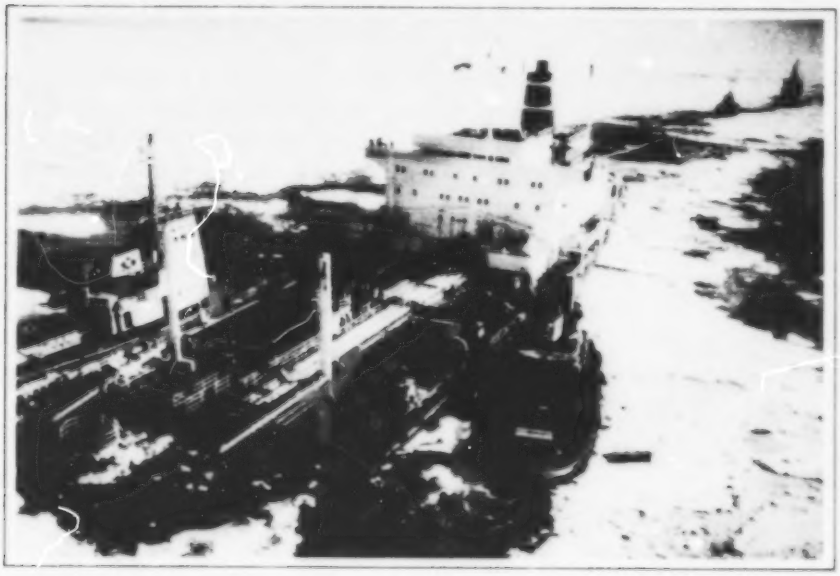
Manna atuttauKattajut Kinijattet Ikajuttiojut nammagijauppalaijut atuttaugiangit Kinugautaujome utsoalunnik atjatuttisarnik pujulinik ingegatoKalippat Labradoriop Strait of Belle Isleliollo imappingitigulippata. Imak atuinnaunitsangit Kinijattet Ikajuttiojullo tikinitsangit pujulimmut piluksimajoKatillugo imak takkonatauppalaijut Kanok Kanittiginningit Kinijattet pujulingit asingillo pujulet, ammalo takkonamidlugit sekuit Kanoelingamangatik, imappik Kanok aulattigimmangat, silalo agviangipat, imak sukkaningit pujulet tingijullo halikptaillo nukKangattitaugajammata tamakkonunga ikajugiagasualigunik.

5. *PitaKagiallajutsauva radariKavimik (LORAN) Kanittojomik ikigasanginnut Strait of Belle Isle-liom?*

Taimaittomik radariKavimik pitaKagiallagiaKangilaguk Kanitangane ikigasangata nuvuane Strait of Belle Isle-liop. Nutamik radariKavimik LORAN-C-mik pigiasijausimalauttuk 1983-me Fox Harbourime, Kanittigijomik 80 mailsinik. Taimna radariKavik LORAN-C atuttaulimmat piojualuppalaijuk ununnisanillo pitattoKappat piosititsigajalungituk. Tapkoa radariKavet pujulinut atuttauKattajut KaujisavioKatadlutik naukkojoKalimmangat satalaittikut KaujijauKattamata.

any vessel of convenience to render assistance to vessels in distress.

The existing Search and Rescue marine services are considered adequate for the proposed tanker traffic associated with the shipping of oil and gas through the Labrador Sea and the Strait of Belle Isle. The response time for Search and Rescue resources to arrive at the scene of a vessel in distress would, of course, be dependent upon several factors, such as the location of primary and secondary Search and Rescue vessels and other ships of convenience. Moreover, existing ice coverage, the sea-state and weather conditions which affect transit time of a vessel or aircraft deployed to provide assistance.



5. *Should there be a LORAN station close to the narrowest point at the Strait of Belle Isle?*

   There is no need for an additional LORAN station close to the narrowest point of the Strait of Belle Isle. A new LORAN-C station was commissioned in 1983 at Fox Harbour, only 130 km (80 miles) away. LORAN-C coverage in the Strait of Belle Isle is excellent now, and more stations would not improve coverage.

J. PILUKATTAUGAJAPPATA SUNATUINNAIT AKILITTAUGAJANNINGIT

1. *Utsoalummik asikKitoKagajappat, ubvalo Kanotuinnak pilukaijoKagajappat atjatuttinit pujulinit Kaujimajautsialutik sukkoisimanninginnik avatagijattinik, ubvalo timmianik, ogganik, poijinik, allunillonet Labradori Strait of Belle Isle-liollo Imappinginejunik, Kanok akilittaujoKagajakKa?*

   Unuttungitunik pijoKasungolikKuk inunnut suliaKavilinnulo kenaujannik Kinugajunik akilettaugiallagomajunut imak asiojisimajunut pilukaviosimajunullo nammatomik utitisiviogiamik kenaujammut pilukaijoKasimapat (Kaujimajauppalo Kanok pilukasimappat utittisiviogajattok)annelune ogganianinganik (poijet ilaliotitautillugit) ubvalo ogganianimut knaujaliojunnut.

   i.) asiojisimajut pilukaviosimajollonet utsoalummut asikKitausimajomut pujulimmit kenaujamik asinginillonet asiojisimajut, tunitjiviogajattut mallegatsatigut ilitagijaujukkut akilittotaugajattukullo Kanadaup Pujuligijingita Mallegatsangitigut (CSA) kamajiojumit Kanadame AngajoKasuanganit Ingegautiligijingita. Tamna CSA-ngujuk akilittoinik utittisigasuannik asiojijausimajunut ilengappalaijok kissiane utsoalunnut sukkutaujunut pujulinut, ammalo ogganiop mitsanut utittisiviogonalattut akKisoijoKagiallaKatillugo mallegatsane sakKititaulattuk. Sivollipamik asiagugiallak Kanoelittaugiallagonangitunik mallegatsakattitaujut namminilet pujulinik imak asikKigajagagunik utsoalummik pilukainialutik. Tullia, Pujulet Kanoettotuinnait Utsoalummut Sunatuinnanik Salumaillititsigajappata KenaujaKavisaulattuk (SSOPF) pigiasijaulttok atitgiallalugo nutamik Kanadamiot Kenaujattavigigajattanganit Piolimaviojuk (MPCF), tamna kenaujaKaviolattuk sivolliliolunillo atuttauKattalalittuk kenaujammut akiliosiangugiaKajunut inunnut. Tapkoa MPCF-kut pigiasijausimalauttuk imak pigiasijoKaKatillugo utsoalunnik atjatuliaKitainnaniammat Kanadamut Kanadaullo asianut nunannut. Pingajunga, akiliosiamminik oKattoKappat asiojisimanniminik sunatut ogganiadlune ogganiatiojuk ilitagijauKataugajattuk kenaujamminik asiojisimajaminik ututtisiviogonaniminik.

   Okoa ilitagijaugutaugajammijut Kaujimajaulimmijut:

   (a) inutudlutik ogganiajut kenaujaliogasuadlutik kenaujaliogutigijangillo asiojijangit akilittaugonatut, katitsoidlune, najuttiKadlune, pigoitsadlunillo ogganik Kanoettutuinannik, ammalo piosigijaunningagut katitsutaudlutik sunatuinnait imappimiotait pigottuit;

   (b) motavagijaujuit ogganiatinut atattutautidlugit ogganniatiojunut;

   (c) ogganiatiojut oggaminik namminik itsavile!;

J. COMPENSATION

1. *If there was an oil spill, or some other impact from the tankers which is believed to have a negative effect on the environment, or on the birds, fish, seals or whales of the Labrador Sea or the Strait of Belle Isle, what compensation plans are available?*

   Several options are now available to individuals or businesses filing claims for compensation for loss or damage of an attributable nature (those for which the source of damage is known) affecting their fisheries (includes seals) or fishing industry activities.

   i) Loss or damage from oil spilled from a ship can be recovered under the liability and compensation provisions of the Canada Shipping Act administered by the Minister of Transport. The Act's compensation provisions are restricted to impacts from oil spills from ships, although amendments soon to be in effect are relevant to the fishing industry. Firstly, provisions impose strict liability on the owner of a ship for oil pollution damage. Secondly, a Ship-Source Oil Pollution Fund (SSOPF) will be created by renaming the existing Maritime Pollution Claims Fund (MPCF) that will be a fund of first resort for the payment of compensation. The MPCF was created from a levy of oil shipments into and out of Canada. Thirdly, loss of income by specified fisheries-dependent individuals will be considered as a compensable loss. Specified inclusions are:

      (a) individuals deriving a living from fishing including the production, breeding, holding or rearing of fish, and from the culture or harvesting of marine plants;

      (b) owners of fishing vessels rented to licensed commercial fishermen;

      (c) shore-based individuals handling fish directly upon landing;

      (d) persons renting or chartering sport fishing boats;

      (e) fishplant workers (except those exclusively engaged in supervisory or managerial functions unlessthose functions are performed in a family-type co-operative plant); and

      (f) persons hunting or fishing for skins or food for their own use.

(d) inuit attatujut attatutitsijullonet omiannik ogganiajut silakKijallutik;

(e) Koatsevine suliaKattet (ilitagijaungitut aulatsinimminik kamajiojullo Koatsevine, imlle ilitagijauKataugajttule ilaget Koatsevimmine aulatsijut) ammalo;

(f) inuit pinasoattiojut ogganiatiojullonet Kisinnik niKitsaminillo namminitsaminik pitajut. Tapkoa Kanadame Pujulet Mallegatsaliangit manna Kanadaup Katimajitsuanginelittut takkotitsijut ekKanamaginniminik sukkutautailigianginnik ogganianiop mitsanut utsc lummut asikKiviogajagutik pujulimmit. Tamakkoa mitsanut KaujisautiKagomagutse okoa Kaujisavigigajattase:

Director General
Canadian Coast Guard
Newfoundland Region
P.O. Box 1300
St. John's, Newfoundland
A1C 6H8
(709)772-5150

ii) Assiojisimajut pilukaviosimajullo itijume imappime utsoalummik asikKijoKaKatillugo akilittaugonatut Utsoalunniatiojuit Pilukattailiniollo Mallegatsangita SuliaKavinganit (OGPCA). Tamna mallegatsak aulatauppalaijok AngajoKalaginganut NunalitoKaujuit Inullagiligijikkunginit Kanadamionnik kamajunik nunalinnik 60 degreesine Taggane, nunangoane allatusimajune, amma kamagijaumidlutik AngajoKalaginganut Ujaganniavet Koatsanattoligijet Piviannaligijinganut seKinganejut 60 degreesinik taggane allasimajome nunangoame. Kanadame UtsoalunniaKavingata aulatsineginnik tapkonenga AngajoKasuangujunnik ikajujut suliaKaviKanninginnik OGPCA-kunik. Tallimait mallegatsanginnejut OGPCA-kut piogijauvalajut inunnut ogganiatiojunut okoangujullo:

(a) Mallegatsak illonainik asiojijausimajunik akilittoiKojijuk tautseKojijullo asiojijausimajunik seKKolutausimajunillo;

(b) AkilittoiKojijuk tautseKojijullo mallegatsaujuk "asikKitoKanniop" mitsanut oKalagiallajok taimak utittisiviogonaninginnik pilukaijoKagajappat "amiakkovininnut" imappiop natinnajanginnejunut;

(c) Akilejaugiallagajattut kenaujakkut "illonanginnik asiojijausimajunik pilukattausimajunillo". Asiojisimajut pilukattausimajullo pivitsaKattisimmijut akiliosianik akiliosiangugajalattunillo jarine Kaijone. Asiojitituagunik pinasoattiojut, pikiusajuit ogganianiojuillo nunalitoKaujunut amma ilijauKatausimamijut mallegatsangita tukitagijausimanninginnut;

Amendments to the Canadian Shipping Act, recently passed by the House of Commons, reflect the importance given to the protection of fisheries interests should oil be spilled from a ship. For further information contact:

Director General
Canadian Coast Guard
Newfoundland Region
P.O. Box 1300
St. John's, Newfoundland
A1C 6H8
(709) 772-5150

ii) Attributable loss or damage resulting from offshore oil and gas operations can be recovered under the Oil and Gas Production and Conservation Act (OGPCA). The Act is administered by the Minister of Indian Affairs and Northern Development in areas of Canada north of 60 degrees N, and by the Minister of Energy, Mines and Resources south of 60 degrees N. The Canada Oil and Gas Lands Administration (COGLA) supports both Ministers in the administration of the OGPCA. Five provisions of the OGPCA are of interest to persons associated with the fishing industry:

(a) The Act provides for absolute liability for loss or damage;

(b) The liability and compensation regime extends beyond "spills" to include damage resulting from"debris" on the ocean floor;

(c) Compensation is payable for "all actual loss or damage" incurred. Actual loss or damage is defined to include loss of income and of future income. Loss of hunting, gathering and fishing opportunities by aboriginal peoples is also included in the definition;

(d) Tamna akilittoiniop oKausingata tukinga kenaujatsaKattisipalaijuk kenaujanginnik utsoalunniatiojut, allaljusiakkut kenaujaKattisinniminik allasimadlutik, Kaujimattisidlutik sulitsiatomik piolimadlininginnik oKalappalaijut;

(e) IlijauKatausimajuk suliaKavigijaujup kamatsiagiaKannisangit akKisuttausimajuk Mallegat- samut uvunga ilingajumut, imak pijagiakillititausimagasuamut KinugajoKalippat kamagijaugiaKalippata Kinuagijaujut kenaujait utititaukKojaujullo. Taimna Kinugajuk asiojisimagame pilukaviosimagamillo idluatsaijuttigut ikajuttausungogajattuk nammasingiotigijaminik oKallune malletuagune mallegatsaujomik. AngajoKangujuk pivitsaKattitaujuk pitsatuniKagiamik akilegiamik Kinuagijaujunik Mallegatsaujumik mallelune. Tamna mallejaugialik ekKanamagivuk imak ikajugiaKammata inunnik Kinugajunik suliagennataminut utisngogasuamut tagvainak. Tamatoma mitsanut Kaujisagiallagomagutse okununga allagajakKuse:

Manager, Environmental Affairs
Canada-Newfoundland Offshore Petroleum Board
5th Floor, TD Place
140 Water Street
St. John's, Newfoundland
A1C 6H6
(709) 778-1402

Akiliosiaminik laisensilet ogganiatiojut imminik ogganiajut, imak ilangane asikKitaujut piongitunik pitaKasungommata, tavatoalle pujulinit ogganiaviojunit imappinit, utitttaugajattut akiliosiangit idluatsaijukkut mallegatsaujutigut mallegamme Numer 33-me Ogganiatet Mallegatsangita mitsanit, tamana aulataujuk AngajoKalaginganut Ogganiatuligjet Immapiligijet Avataligjikkunginnilo Kanadame. Tamatoma mitsanut Kaujisagiallagomagutse okoa allavigigajattase:

Regional Director General
Conservation and Protection
Atlantic Region
Environment Canada 5th Floor, Queen Square
45 Alderney Drive
Dartmouth, Nova Scotia
B2Y 2N6

UBVALO

Regional Director General
Department of Fisheries and Oceans
Newfoundland Region
P.O. Box 5667
St. Jhn's, Newfoundland
A1C 5X1
(709) 772-4417

(d) The compensation scheme provides for the carrying of financial responsibility by the oil industry, in the form of a letter of credit, a guarantee or indemnity bond;

(e) Included within the general administrative framework established by the Act, is the procedure to make it easy to file and process a claim and receive compensation.

The claimant who suffered loss or damage may sue for damages by invoking the appropriate provisions in the Act. The Minister is empowered to pay for claims under the Act. The importance of this administrative process is the ability to assist claimants to return to normal activities within a reasonable time. For further information contact:

Manager, Environmental Affairs
Canada-Newfoundland Offshore Petroleum Board
5th Floor, TD Place
140 Water Street
St. John's, Newfoundland
A1C 6H6
(709) 778-1402

Income lost by licensed commercial fishermen because of deposits of deleterious substances, except from ships in fisheries waters, can be recovered through the courts under the absolute liability provisions of Section 36 of the Fisheries Act, administered by the Ministers of Fisheries and Oceans and of Environment Canada. For further information please contact:

Regional Director General
Conservation and Protection
Atlantic Region
Environment Canada
5th Floor, Queen Square
45 Alderney Drive
Dartmouth, Nova Scotia
B2Y 2N6

OR

Regional Director General
Newfoundland Region
Department of Fisheries and Oceans
P.O. Box 5667
St. John's, Newfoundland
A1C 5X1
(709) 772-4417

Compensation claim procedures for events such as major oil spills are currently spelled out in the government legislation mentioned and in voluntary industry plans. Industry's main objective for claim assessment and settlement has been to respond fairly and quickly to valid claims. Past practice has

Utittisiviogomanniop Kinugautiojuit mallegatsangit sorlo utsoalualummik asikKijoKappagajappat manna oKalautaulittut kavamait mallegatsaliottinginnut oKalautaummidlutik ikajugomajut akilittotaulugatik suliaKaviojut piniannisagilattangit. SuliaKavet pigomausigigomalauttangit piniannigigomajangillo Kinugajunik KimigotiKaligunik pijageguti Kagomaningillo Kinugagijaujunik imak kiosagaigialet nammagijauniatillugit sulitsiatillugillo. Taimak sivongane pijoKasimaniammat Kinugajuk kampaniojullo kivgatuttingit angeKatigesimalauttut tamammik katiKatigesimadlutik.

Tamana pinianniojuk pijagiakittuagulak akunillo utakKititsitailititsisuk akitujualugonalungilalo idluatsaijuttigut kamagijaungagune. Sunatuinnait sakKisungomata angeKatigegutiligunik Kinugajup utsoalunniatello kampanikkungit ilangane angeKatigenningit sivuppiagonangiomatitsist. Taimak pijoKagajakKuk angeKatigegutigasuajuk angeKatigegutiomagonagonaigamik ubvalo taimna pilukaisimajuk passijauninga sulijumik sakKititaugonangipat. TaimaijoKalimmat angeKatigegutigasuannegik suvalligonangiomippat asiagungak sangogiaKagajattuk taimna pilukaviosimajuk akilittotaugasuamut sulisimatsiamat taimak piviolukasimanninga, imak kamajoKagiaKalammat sunatutsiak akilitaujutsaumangat Kaujitsiagasuamut angeKatigetsiagasuallutillo, imallo akKisoigasuallutik Kanok akilittotaujutsaulammangat Kanorlonet pijoKajutsaulammangat pivitsatiKatsiagasuamut Kinugajok.

2. *Kanok akKisoijoKasimava akilittaugiaKajut pitjutigidlugin imak utitttaugon-nangitut issomagidlugin?*

   i) Kaujimajaungitumik asikKitoKagajappat utsoalummik pilukatausimanningita Kinugautingit tugattitaujutsait suliaKavingata angajoKanganut Maritime-mime Salumaillititausimajut KenaujaKavinganut (takogit Mallegatamut Numer J.1).

   ii) Atlantikkime, asiojijaujut pilukattausimajullo itijummit imappinit utsoalummut pijausimajut utittitaugonaningitut utosluniiatiojunut, ututtitaugonatut mallegatsane akilittotaulugatik suliaKatiKagonatut kamagijaudlutik taijanut Imappime Frontier Division of the Canadian Petroleum Association (FD/CPA). Tamna pigiasijausimalauttuk ikajuttiKadlutik ogganiatuligijet katitsiKatigenninginnik, tavatoalliguk ikajugonalungitut Kinugajunut ogganiatainnasimajunut sivollipamik ubvalo illonainik ogganianigijaminik asiojisimajunik. Tamna Pigiasijausimajuk sulle ttutausimalungituk issomagijaujulle tagvainaunitsak angeKatigejoKagajanninganik tapsominga Kinugagutik FD/CPA-kut kamanninginne. Tamatsoma mitsanut Kaujisagiallgomagutse okonunga allagajakKuse:

been for the claimants and company representatives to negotiate directly. This approach is simple and reduces time delays and costs associated with court action.

Situations may arise when direct negotiation of claims settlements between the claimant and an oil industry operator may not be possible. Such situations may occur where the parties involved simply cannot agree on a settlement or where the party responsible for the damage or loss cannot be clearly identified. In these situations some process other than direct negotiation would be necessary to confirm the claims, to assign responsibility for the actions causing damages or losses to determine the amount of a fair settlement and to establish what form of compensation payment or action would be appropriate.

2. *What sort of compensation plans exist for non-attributable sources?*
   i) In the event of a mystery spill, damage claims should be forwarded directly to the administrator of the Maritime Pollution Claims Fund (see Section J.1).
   ii) In the Atlantic region, loss or damage from offshore oil and gas activities that cannot be attributed to a specific oil and gas operator may be compensated for under the provisions of a voluntary plan established by the Frontier Division of the Canadian Petroleum Association (FD/CPA). The plan was established in co-operation with fishermens' associations, but does not extend to claimants beyond the primary sector of the fishing industry or to claims resulting from loss of access to the fisheries. The Plan is untried but is aimed at the quick settlement of claims within FD/CPA's operating

Regional Director
Frontier Division
Canadian Petroleum Association
P.O. Box 5218
St. John's, Newfoundland
A1C 5W1
(709) 726-7270

3. *Pitjutigivlugit pilukattausimajut (a) utittitaugonatunik ammalo (b) utittitaugonangitunik, taimtsainak malegiaKalkKat utittisiviogomajut akilittaugomajullo taimatsainak akilittotaulattun tagganejut seKinganejulle 60 degreesinik nunangoamejuneng?*

   Sulliguk mnnamut atjigelungitut pitgijausungojut, imallo illonagalangit utsoaluit atjatuttaugegunik Labradorip Imappingitigut atjigettomik akKisuttalapplaijut adjigetillugik taggamionut seKinimmionullo 60 degrees Tagganut nunangoame nalunaikkotaup.

area. For further information contact:

Regional Director
Frontier Division
Canadian Petroleum Association
P.O. Box 5218
St. John's, Newfoundland
A1C 5W1
(709) 726-7270

3. *Regarding damage of (a) an attributable nature and (b) a non-attributable nature, will the requirements for compensation be the same north and south of 60 degrees North?*

   While there are different requirements at present, by the time major shipments of oil are made through the Labrador Sea, compensation requirements are expected to be consistent north and south of 60 degrees N.

K. SULIAKAVET SULIATSATAGIJAUGAJATTULLO

1. *SuliaKavisaKalakKa, suliatsatajoKalunillo ilinniatitaujoKalakKalo nunalimmionik inunneng utsoaluit atjattutaulippata Labradorip Strait of Belle Isle-liollo Imap-pegitigun?*

   EkKanamagilakKuguk suliatsait atuttaulagilattut pilukattautailigiaKanningit pujulet issomagijaugiaKammata imak taipkoa suliatsatajut pujulinne ilisimagejot suliamminik, taipkoalo mannaluatsiak suliaKattiojut atuttaulappalaijut. SuliatsatajoKalakKuguk 70-nik illonaine atjatuttine pujuline, tavatoalliguk ilinniatitausimajunik tigollailattut imak imappiligijet pujulimmiotaillo ilinniagusigiKattajangitigut pulinne. Utsualunniatiguk taimak ilinniagomajunik KinijaKattajugaluat nunalimmionik ilinniagomajunik Kinijadlutik suliaKattitaulattunik Arctikkime atjatuttinik, taimak pujulinik sakKitoKagajappat. Asingit ilinniagatsaulattut, suliatsaulattut suliaKavisaulattulo sakKititaugonasungolattut sakKitoKagajappat pujulimmiot suliaKavitsatagajapata, ammalo silamik sekunillo Kaujisavisattagajapata suliaKavisamik, imallo avatait Kimigotauningit Kanotuinnalo Kimigotokajutsaulippat suliaKavisattajoKagajappat. Tavatoalliguk, mannaluatsiak oKausigigijaugonalungitut ilinniatitaujoKalammangat, suliatsatajoKalammangat suliaKavisattajoKalamangalonet.

   Utsoaluniatiojut tamakkoninga isomatsasioguti Kappalaijut imallo taimak pitisigiamik ilaukKojigasuanginaniattut nunalimmionik, ilitatsisianiagamik Kanok peKojaugajappata ilauKatauligunik pujulikkut, ilitagilattuguk annitautailligiaKanningit pujulimmeligunik, ilitagijaumilutillo kenaujaliogutaujut suliatsatigut, kamatsialutik pujuliop usijangit peKotet, suliaKavingit pujulimme, suliaKattigijangillo.

2. *Taipkoa Utsoalunniatiojut suliatsaKattisiKalakKat annaneng?*

   Ahaila, utsualunniatiojut illonainik suliatsatagiKattalattut, nalletuinnait suliatsaujut ammalattut tamagennut annanut angutinullo.

K. Business and Related Opportunities

1. *Will there be any business, employment or training opportunities for local people associated with the shipping of oil and gas through the Labrador Sea and the Strait of Belle Isle?*

   It is essential that key positions that affect the safety of tankers be filled by the most experienced personnel available, most of whom are currently within the shipping industry. There will be about 70 positions available on each tanker, but most will require specialized training which can only be obtained through marine and seamanship courses and work experience on other ships. The oil industry does sponsor candidates to attend such courses and it will participate in programs to encourage local people to obtain the training and experience necessary to work on Arctic tankers if such vessels come into existence.

   Other potential training, employment and business opportunities might be generated in conjunction with the marine terminals, the weather and the ice forecasting network, and the environmental monitoring and research programs that are likely to be developed. Unfortunately, it is still too early to be specific about the details of possible training, employment and business opportunities.

   It remains in the oil industry's best interests to encourage the involvement of the local people, recognizing the limits imposed on their involvement by ship safety, economics, logistics and other factors.

2. *Will Industry employment be also for female applicants?*

   The oil industry is an equal opportunity employer, and any positions that become available will be open to men or women.

1. *Kanok nunalimmiongujut aulatsisngolaKat aulatsijoKalippat kamajoKalippalo atja-tuttiojunik pujulinik ingegajoKalippat Labradorip Imappingagulippata?*

   Nunalimmiongujut ilauKataugajattut katimajinut Kanoettutuinnanut sorlo Kaujimau-titsiaKattajunut sujoKammangat kivgatutiojutsanillo sunatuinnane pitjutilinnik atjatuttet pujulet apKotigijanginnik, piusigijaujut inosigijaujut avatagijavullo ikajugonatut sivoppiavallianitsanganut. Labrador Inuit KatitsiKatigennikungit atsugotiKaniatut atsugotiKatsainaniattulo ilauKataugomaniminik aulatsiKataugomalutik illonaine sukkutautailititsinime kamaKataugomaniminillo Arctikkime imappingita avataKotigijanginne.

2. *Kanok pigiaKalikKat kavamaujut utsoalunniatiojullo ikajuligonek nunalimmionik atuinna-gutjitillugit atjatuttet pujulet apKotinginnik atoligoting?*

   Mallegatsagilattanget kaujimautigiak ikajuktigegiallo atuttaulattut kavamanut suliaKavigalanullo Kaujititsisiagasoamut issomalotigijaujonek pujulet pilukattailinitsanginnut avatigijaujullo kamagijautsianitsanginnut. OKalaKatauKattagiak inunnut nunaKajonut pujulet apKotigijangitigut, pimmagiovut idluagijautsiatomek piojumillo, pujulet imappikut apKotiKalippata usiligutik utsoalunnek Arctikkimit pijonet, taimallo tamakkoa suliagijaunginnalalittut jarine Kaijone. Taimak pilattut Kaujimautitsiagasoamut Kaujigatsaujonek, oKalautigijauKattavlutik issomalutigijaujut aKKiotitsiagasoaKattalugivlo issomalotigijaujut. Imallo illonatik suliaKaKatigejut tunganattiKatigetsiagasoamut illonainek issomalotigijaminek, najottigijautsiagasoamut oKalautaugasoanullo. Pivalliatitsijet katitsiKatigengit, ogganiatuligijet katimajinget, asingillo nunaliojuit katimajigijanget katitjuKatigeniojuit, pitaviogonnalattut sunanik KaujijoKagomapat.

   Atuttaulagilattok Coast Gardikut Kanadame taijaujut Kanadame Pujuligijet Tukisiniaviojutsait katimajingeta Counsillinget, kivgatuttiKalattut nunalimmionek, kivgatuttitsitivluget Neofunlame katitsiKatigenniojuit, ilaliotitaujunullo adjiggengitonut katimajioKataujonut, sunait pitjutigijaunialippata.

   Inunnek katimatitsinek, oKalaKatigeKattanek ingmigut, Kaujigatsauloatsautivluget Kaujisanneiojuit, kavamajunut ilaliotitaujuit inunnek KaujititsiKattagialet, ilisanniojuit, Kaujigatsaujuillo, illonatik ikajugonnavut tamatomane illonane suliagijaujome.

L. CONSULTATION

1. *What is the role of local people in the management and control of tanker traffic through the Labrador Sea?*

   Local people can participate in liaison and consultative committees concerning tanker routing, and social and environmental impacts. Organizations, such as The Labrador Inuit Association have pushed, and will undoubtedly continue to push, for co-operative management in all aspects of protection and management of the Arctic marine environment.

2. *What is the role of government and industry in helping local people prepare for tanker traffic?*

   The principles of consultation and co-operation will be used by government and industry to address issues related to marine safety and environmental protection. Consultations with people who live along the shipping corridor are essential to the success of future Arctic oil shipping and these will be carried out on a regular basis in the future. The purpose will be to share information, to discuss and resolve concerns, and generally to give all parties confidence that all major concerns are either in hand or are being addressed. Development associations, fishermen' committees and other community organizations are available to provide consultation.

   The main consultative body in Canada is the Canadian Marine Advisory Council, represented at the local level by the Newfoundland Chapter and supported by sub-groups dealing with particular issues.

   Public hearings, informal consultations, formal assessment processes, departmental public affairs initiatives, and special education and informations sessions are all processes which may help.